*Agriculture is the most healthy, the most useful, and the most noble employment of man.*—WASHINGTON.

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THE

## AMERICAN AGRICULTURIST

AND

## FARMERS' CABINET

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S. R. HOBBIE,
*First Dpt. P. M. Gen'l.*

*Post-Office Department, Contract Office, May 28th*, 1849.

### WORK FOR SEPTEMBER, NORTH AND WEST.

*General Remarks.*—Any portion of the work omitted to be done in August, or impracticable to be performed from the state of the climate, as recommended in our last number, may be accomplished this month, such as *sowing winter rye* or *wheat, destroying weeds, composting manure, draining wet lands, sowing turnips, &c., &c.*

*Selection of Seed Corn.*—This month, seed corn should be selected. It can only be well done in the field, by gathering those ears with small butt-ends, the second ripe, and taken from stalks which have two or more well-filled ears to each. In this way, the best varieties of corn in cultivation have been obtained.

*Threshing out Grain.*—Continue to thresh your grain as fast as your business or circumstances will allow; for the sooner this is done, the greater the chance of destroying the eggs of the "weavil fly," which deposites them in the grain in its green and succulent state. "If wheat is threshed soon after

harvest, and thrown into bulk, it undergoes a heat, which destroys the egg, and it sustains no injury; but, if it remains long in the shock, or stack, the weevil hatches, and makes its way out of the grain."

*Fumigating Granaries.*—If your granary is infested with the "black weevil," clear it entirely of grain, place a pan of powdered sulphur in a bed of sand, close the windows, doors, and cracks, and set the sulphur on fire. And the smoke will either destroy or drive the weevils away.

*Cutting and Stacking Corn.*—Indian corn, which has been left untopped, should now be cut up by the roots and stacked. When thus secured, it is entirely beyond the effects of frost, and the stalks make much better fodder than when left exposed uncut.

*Seeding Timothy.*—If you have not already sown your Timothy, let it be done as early as possible this month, at the rate of twelve quarts of seed to the acre. Be sure that the seed is sound and fresh; and, as a protection to the infant plants, sow, also, at the same time, a peck of buckwheat to each acre of ground. Such meadows as have begun to fail, may be increased in their yield of hay, by sowing on them a peck of Timothy seed, with from five to ten bushels of wood ashes, and an equal quantity of lime per acre, afterwards harrowing and rolling it in.

*Care and Management of Stock.*—Every good farmer will provide enclosed yards or pastures for his stock, so that they cannot trespass upon his neighbors' nor his own fields. If they do not have access to sea water, nor salt springs, he will see that they are salted at least twice a week; or, what is better for cattle, horses, and sheep, is, to place lumps of rock salt in their pastures or sheds, for them to lick as often as their inclination may require. Salt, when given to animals in proper quantities, "gives energy to the stomach, strengthens the capacity of the digestive organs, increases the appetite, and, as a resulting consequence, improves their general health and condition."

Keep a watchful eye over all your domestic animals, and see that they are not diseased. If they have a full and frequent pulse, a loss of appetite, a dejected head, and a languid, or watery eye, with a disposition to lie down in a dark or shady place, or, if the hide adheres closely to the ribs, and the hair stands on end, depend upon it, they are ill, and require the immediate attention of the doctor, or veterinarian.

All animals intended to be fattened, should now be pushed to the extent of your means. Much more flesh can be put on them with the same quantity of feed, between the middle of this month and the end of November, than in a similar length of time, when the weather is cold. Indeed, so important is the difference, that it would be judicious for every man to reserve grain enough from his last year's store, to feed his cattle, sheep, and swine, till the coming in of his new crops.

*Hemp and Tobacco.*—Finish harvesting and securing your crops of hemp and tobacco, if not previously done.

*Kitchen Garden.*—Hoe and thin out the turnip crops. About the 15th, sow cabbage, cauliflower, broccoli, and carrots, to remain protected in the seed beds during winter, for early transplanting in the spring. Gather garden and flower seeds as they ripen, if not done before, and carefully put them away in a cool dry place, secure from the depredation of vermin.

*Fruit Garden and Orchard.*—Budding of peach trees may be performed in the early part of the month; also that of other trees, so long as the bark will peel. Peach, plum, apricot, and all northern trees bearing stone fruits, may be pruned while the sap is in downward motion. Strawberries may now be planted in beds.

*Flower Garden and Pleasure Grounds.*—Toward the close of this month, beds may be prepared for planting tulips, hyacinths, anemonies, and other flower roots and shrubs that are to be removed the next. Trees and shrubs may be propagated by cuttings and layers. Pines, maples, and nut trees may now be pruned.

## WORK FOR SEPTEMBER, SOUTH.

*General Remarks.*—Several of the hints given for the Work for August, South, will also be suitable for this month, as *picking cotton, harvesting tobacco, rice, &c., &c.*

*Harvesting Cotton.*—This is commenced when the bolls have begun to expand, and the cotton is protruded. It is continued as the bolls successively ripen and burst their capsules. It is done entirely by hand, the picker passing between two rows and gleaning from each. The cotton is placed in a bag capable of containing fifteen or twenty pounds, which is hung upon his shoulders or strapped upon his breast. These are emptied into large baskets which are taken, when filled, to the gin house. On low grounds, especially, much loss is incurred in some seasons from the want of the sun to cause an expansion of the fibre within the boll, so as to cause it to open. The boll is composed of five divisions, in each of which there is a parcel of cotton wool surrounding each seed, there being several in each lock of cotton. When green, these fibres lie close to the seed, and as it ripens, the fibres become elastic, the boll becoming hard and brownish. The Sea-Island has only three divisions, as also the Egyptian, which is only the Sea-Island of the best variety, with black seed, smooth, and a yellowish tuft of fibres on the small end.

There is a peculiar art in gathering the cotton from the boll, which can only be acquired by practice; many gather equally fast with either hand. The left hand seizes the stem near the open boll, or the boll between the two middle fingers, the palm of the hand up; the fingers of the right hand are inserted tolerably low down in the boll, a finger on each lock of cotton; then, as the fingers grasp it, there is a slight twisting motion, and a quick pull, which, if done well, will extract the contents.

Cotton should be gathered from the field as clean as possible, taken to the scaffolds and dried until the seed will crack when pressed between the teeth, not crush, or mash, but crack with some noise. It should be frequently turned over and stirred, and all the trash and rotten pods taken out, while this is done, to insure its drying earlier.

If seeds are wanted for planting, gin the cotton immediately, and spread the seed over the floor

some five inches thick, until perfectly dry. If the cotton seed be not wanted, pack the seed cotton away in the house, to remain until a gentle heat is discovered, or until sufficient for ginning. After it has become heated, until there is a sensible feeling of warmth to the hand, and it looks as if pressed together, open and scatter to cool. This cotton will gin faster, have a softer feel, is not so brittle, therefore not so liable to break by rapidity of gin, and has a creamy color; the wool has imbibed a part of the oil that has exuded by the warmth of seed, and is in fact restored to the original color.

*Sowing Oats, Wheat, and Rye.*—About the last of this month, or early part of October, sow your oats, wheat, and rye. Grass seed may also be sown this month, as well as the next.

*Kitchen Garden.*—Sow beets, carrots, parsneps, parsley, celery, chervil, broad-leaved endive, garlic, lettuce, large northern cabbages, roquet, shalots, cress, mustard, spinach, Windsor beans, lentils, and radishes (round and long.) Transplant celery, artichokes, sorrel, and split onions. Large carrots may be planted for seed, if not previously done. Save pumpkins and squashes for winter use.

*Fruit Garden, Shrubbery, &c.*—Finish budding and planting out monthly roses. Sow hardy flower seeds. Prepare beds of hyacinths and other bulbs. Water your plants as you set them out.

## ANALYSES OF SOILS.

We insert below, as furnished us by Dr. Antisell, Chemist to the American Agricultural Association, the analyses of two samples of soil from the farm of Richard Peters Esq, of Atlanta, Georgia.

The constitution of 1,000 parts of the surface soil consisted of

| | |
|---|---|
| Moisture, | 195.7 |
| Vegetable matter, | 73.9 |
| White silicious sand, | 630.0 |
| Alumina and protoxide of iron, | 94.8 |
| Carbonate of lime, | 1.2 |
| Magnesia, | 0.3 |
| Saline substances, soluble in water, as chloride of sodium, | 2.1 |
| Gypsum, and lime with organic acid, | 2.0 |
| Potash and phosphoric acid, | Traces. |
| | 1,000.0 |

Deficiencies—lime and potash.

The ingredients of 1,000 parts of the subsoil was as follows:—

| | |
|---|---|
| Moisture, | 165.7 |
| Vegetable matter, | Trace. |
| Quartz, and particles of fine sand, | 740.0 |
| Alumina and peroxide of iron, | 80.0 |
| Carbonate of lime, | 2.0 |
| Magnesia, | 5.3 |
| Common salt, | 5.5 |
| Sulphate of lime, and potash, | 1.5 |
| Lime, | Trace. |
| | 1,000.0 |

The surface soil was of a friable texture, and had a dark color. It was of the same geological formation as the subsoil, from which it differed only in the greater quantity of vegetable matter, a lesser quantity of soluble salts, and the condition of its iron, which, owing to moisture and vegetation, had been preserved in a state of protoxide; while, in the subsoil, it was in a peroxide.

Exposure of a soil to the air will fully oxidate its iron, which is essential to be done in order to produce good crops. This action will be hastened by liming, which the land the samples in question were taken from requires. It may be best applied in the shape of marl or compost, as the ground does not absolutely require lime in a caustic state. If a compost be used, bones might enter into its composition, which also contain a large proportion of phosphoric acid. Twenty bushels of ground bones to the acre would suffice for a good grain or turnip crop, and for the deficiency of potash salts, twelve bushels of unleached wood ashes would be all that is required to make a fertile soil.

## THE NEXT SHOW AND FAIR OF THE NEW-YORK STATE AGRICULTURAL SOCIETY.

We would remind our readers that the Show and Fair of this society will come off at Syracuse, on Tuesday, Wednesday, and Thursday, the 11th, 12th, and 13th of the present month. Col. Voorhies, the contractor, is at work with an efficient force in making the erections, and everything required for the use and convenience of the occasion, which will be in readiness previous to the time of meeting. The citizens of Syracuse, also, are preparing for the reception of visitors, and every accommodation that the city can supply, both public and private, will be open for the entertainment of those in attendance at the show.

Among the guests expected to be present, may be mentioned the President and Vice President of the United States, the Governors of several states, Ex-President Van Buren, Hon. Henry Clay, and numerous other distinguished personages of this country, as well as from abroad. The annual address of the society will be delivered by Professor James F. W. Johnson, of England, who has lately arrived by special appointment. Thus, the assurances are such, as to render it probable that the coming show will be one of the most extensive, both in point of visitors and objects of exhibition, ever witnessed in the United States. The premiums offered are liberal, amounting, as some have estimated, to six or seven thousand dollars.

The railroad companies in the state of New York offer unusual facilities to persons attending the fair, and for the transportation of animals and other articles for exhibition.

## NORTH-AMERICAN POMOLOGICAL CONVENTION.

The Horticultural Society of Syracuse have made arrangements and suitable accommodation for the annual meeting of the North-American Pomological Convention, which is to be held, in connection with, and at the same place as the above, on Friday, the 14th of the present month.

Growers either of old or new varieties of fruit, are requested to send or bring specimens of the same, and communicate information of importance in relation thereto, directed to the care of P. N. Rust, Esq., of Syracuse, N. Y.

Onondaga Salt.—The activity in the salt manufacture has not been surpassed in any former year. The quantity manufactured since 1st January, is given by the Syracuse paper at 1,171,136.16 bushels, or an increase of 401,488.38 bushels over the previous year.

### FRUIT GATHERER.

This instrument consists of a wire skeleton, with a moveable ring at the top, to which is attached a long stocking of sufficient diameter to admit the fruit and allow it to roll, or slide, into the hand or basket of the individual using it, as indicated by the adjoining cut. The skeleton is attached to a rod of convenient length by means of a screw.

Fruit Gatherer.—Fig. 66.

The operation of the instrument is as follows:—Hold the rod and basket in the left hand with the stocking in the right. Direct the ring to which the upper end of the stocking is attached, under each fruit intended to be gathered; push the implement with the left hand, so that the fruit may enter the stocking through the ring; then, by a sudden jerk of the stocking, with the right hand, and drawing the pole downwards at about the same time, with the right hand, the fruit will become detached from the bough, and roll, or fall, through the stocking into the basket, without being injured or bruised.

An implement of this kind will be found particularly valuable for gathering fruit, which cannot easily be reached by the hand. They are of various sizes costing from $1.25 to $2.50 each.

### REVIEW OF THE JUNE NUMBER OF THE AGRICULTURIST.

*Points to be Considered in the Choice and Erection of Lightning Rods.*—It is doubted by a great many persons whether a lightning rod ever saved a building. Who knows? That nine tenths of them are totally inefficient, I have not the least doubt. I know that green trees planted near a building are good conductors. [Provided they extend a certain height above the top of the house.—Eds.] If an iron rod is not painted, or varnished, it will become rusty, and according to this article, lose its conducting power. If all the theories of this writer are true, there is not one lightning rod in a hundred that is worth a farthing as a protector, and the sooner they are pulled down and applied to some useful purpose the better.

*Rough Notes by the Way, No.* 8.—I wish every farmer and all his neighbors, would read Mr. Allen's description of how an "ignorant city gentleman," as I have no doubt he was called, set out his fruit trees. He did not merely stick them in a hole in the ground and then trust to luck to make them grow. No; he was a "book farmer," and studied into the science of transplanting. I have no doubt but he is laughed at by his neighbors for "wasting his money" in reclaiming his wet lands by underdraining. For such is the disposition of the great mass of American farmers. They will not improve themselves nor let anybody else, if they can prevent them by ridicule. The world cannot present another so strange an anomaly as may be found among farmers—these active, keen, well-informed men upon general subjects, and nearly all of them readers; yet, one half of them positively will not read any work relating to the improvement of the soil, but seem disposed to ridicule every one that pretends to practise, or even think, that there is a better way than that practised by their fathers a hundred years ago. Almost the only point upon which downright, obstinate stupidity can be found to exist among the American people, is upon the subject of improvement of the soil upon the principles of science, as discovered and applied in the present age.

*Adulteration of Food, No.* 12.—I again commend these excellent articles. But is wine properly ranked among articles of food? If it is, the ingredients of which it is usually made, are anything but wholesome. Yet, thousands will buy such vile concoctions as are here described, sooner than drink the pure juice of American grapes.

*On Breeding, No.* 1.—That our native breed of cattle might be greatly improved, is beyond doubt. But they never will be while the fashion prevails of letting them run at large through the commons and highways. One of the secrets of the improvement, both in cattle and hogs, in the New-England states, is greatly owing to the abolishing of this system—this peculiar American system of turning all cattle out upon the highways to herd and breed together, as best they may. Only persuade the people to have laws that every man *shall* fence in his own cattle, and they will soon begin to look about them to see if they cannot have a breed that will give more profit from a less number than they now get from a large herd of street runts.

*Cultivation of the Cranberry.*—But if this fruit will grow so well upon dry land, why is this direction necessary for wet land, unless indeed, it be where land is worth more than it is in most parts of the United States? It is true that many pond margins might be cultivated with cranberries, with little or no cost, and so might a thousand crooks and nooks, be planted with strawberries, raspberries, blackberries, currants, grapes, &c., &c.

*Agricultural Tour, No.* 6.—The enormous amount of saccharine produced from Mr. McCutchon's place, without exhausting the soil, is sufficient proof that sugar cane will never exhaust that land, if it is properly cultivated; because the whole of the matter taken away from the cane, or that cannot be again returned to the land, is drawn from the atmosphere, and not the soil. This is the most interesting letter of the series yet published.

*Raising Corn without Manure.*—I commend this article of Mr. Baker's to the serious attention of a great many people. My opinion is, that the way he raised this large crop of corn without manure, is the true way of planting corn. Topdress the Timothy and make it just as rich as you like, and then

turn under the sod as deep as you can, and it will bring a better crop with less labor than any other mode. One of the great comforts of this mode of cultivation is, that you have but very few weeds, and but little grass among the corn, and the sod, rotting in the latter part of the season, makes grain instead of stalks. Notwithstanding the success of Mr. Baker, I presume that few of his neighbors will "go and do likewise," because he is a "book farmer."

*English Mode of Making Butter.*—I wish Dr. Wills would explain the use or advantage of putting the saltpetre in the milk pail. I do not think that the cows should be housed at night in this country during the hot weather of our summers. Some of the other directions are very good. A thermometer churn, however, where the hot water is put around, instead of in, the cream is much better.

*Superiority of Brown Bread over White.*—What is the use of preaching to a set of people dying with dyspepsia, in consequence of eating so much white fancy bread, when they might prolong their lives by changing their diet to brown bread? They won't do it. They would rather "eat and die."

*The Effects of Bright Colors on Animals*, the writer says is such as to provoke a bull almost to madness. Ah! And according to my way of thinking, it has almost driven the wearers to madness, for every comfort and in some cases virtue, health, and even life has been sacrificed to obtain these bright-colored garments. As to bright colors exciting a warlike spirit, I cannot say; but I am sure it sometimes excites a very wicked one, full of envy, covetousness, ill will, and foolishness.

*Pork* vs. *Bacon, &c.*—I would refer this writer to some of the back volumes of the Agriculturist, where he will find a true and particular account of all he wishes to know upon this subject in several experiments made in cutting up pork by one of your old correspondents, Mr. Robinson, of Indiana. It is a wonder that good stout thread, in hanks, cannot be made of cotton, as well as fine thread upon spools. And it is equally wonderful that the kind of cotton hose that "Querist" inquires for cannot be had. I make it a rule never to criticise the style of a correspondent, for if I did, I should say that the ideas of this writer are sadly jumbled up together.

*Filtration Upwards.*—That looks plain and reasonable. But the best filter for Croton water, or any other, where there is a strong head, is the diaphragm filter. Another excellent filter for household use, is a filtering stone. But the apparatus described in this article is certainly very neat and I have no doubt is very effectual. There is no use of drinking muddy water when it is so easily purified. I commend these filters to the attention of some of the dwellers upon the banks of the Mississippi, and all other muddy streams. It is scarce possible to drink such water without bringing on a diarrhœa, and this is the reason so many emigrants are now dying of cholera in the towns on the Mississippi and its tributaries. I look upon a voyage up any of these streams as the surest preparation an European emigrant could take to ensure his getting the cholera.

*American Capons.*—By reference, American capons must be something different from English ones. It seems by Mr. Colt's account, that it is "practice that makes perfect," in this business, as well as in some others. Caponising turkeys is something new. Can't you contrive to get me an invitation, also, to that "thanksgiving dinner?" If I find that turkey very nice, I will recommend others "to go and do likewise," the invitation to dinner included.

*Green Sward for Root Crops.*—My opinion is the same as in regard to corn. I fully believe that we should see our account in it, if we should grow a great many crops in the same manner we should see our product increased and labor decreased. And finally if we should read more and try to improve, instead of dragging along the same old path our fathers trod, without ever thinking whether it is right or wrong, we should improve more, live easier, and die better." REVIEWER.

## POTASH FOR AGRICULTURAL PURPOSES FROM GRANITE.

WE clip the following from an exchange paper, as containing valuable information for the agricultural public:—"A discovery has been made in Ireland, that the granite on an extent of 70 miles in Wexford, contains so large a proportion of potash, that the alkali can be extracted by a chemical process so as to become an article of commerce. It is estimated that there are 2,000 tons of potash, the produce of America, consumed annually in England and Scotland, the present cost of which is £40 per ton; and that, by working the granite of Dalkey, which extends inward to Sandyford, the same quantity could be extracted by means of the capital of £10,000, and sold at £20 per ton, yielding a revenue rate for the capitalists, and diffuse the blessings of employment among the people, and not only render it quite impossible for the Americans to compete with the Irish, but really push an Irish trade in potash into the American continent."

The process of extracting the potash from granite is not given; but we presume it is done by roasting, and then slaking, by pouring water upon it when hot. This will undoubtedly liberate the potash to such an extent, that all the alkali will be readily available for the food of plants; all that remains to be done is simply to throw it upon the land. The more expensive process of leaching and boiling, to extract the potash, which is required to prepare it for market, may be entirely avoided.

The component parts of granite are quartz, felspar, and mica. Sienite, which is often called granite, and is the material generally furnished from the quarries at Quincy, Mass., differs from the technical granite of geologists, in containing hornblende in place of mica; but being formed under similar circumstances, and frequently in the same beds or quarries with granite, it often passes, by imperceptible gradations, into a combination with considerable proportions of quartz and mica.

Pure quartz consists entirely of silex. Felspar varies essentially in its constituent parts, but frequently contains from 12 to 17 per cent. of potash, one to two per cent. of lime and soda, and about 18 per cent. of alumina. Mica contains from 4 to 8 per cent. of potash, and other alkalies, valua-

ble for agricultural purposes. Hornblende, also, varies materially in its composition, but contains from 12 to over 20 per cent. of lime, 10 to 20 of magnesia, &c. In their natural condition, unassisted by art, these fertilizing ingredients are given out slowly, though the felspar, when subject to moisture, is slightly decomposed by the rootlets of plants, which suck from them, as they do from bones that are buried in the soil, some of these ingredients essential to their own structure and vitality.

When science shall have advanced to a sufficient extent, to detect the mines of agricultural food which now lie unheeded in the soil, future generations will probably find in the barrenest sands, and such as are now deemed utterly worthless, stores of fertility, that need but the ingenuity of man to compel them to yield their hoarded wealth, and which, united to the elements of the atmosphere, will furnish the elements of life to countless myriads of the human race.

## AGRICULTURAL SCIENCE IN COLLEGES.

We notice, with no little pleasure, the gradual, but certain advancement which the practical sciences are making in our time-honored seats of learning. Yale College, at New Haven, has already an endowed and thoroughly-established professorship, which is ably filled by Professor J. P. Norton. Amherst College, in Massachusetts, has a practical farmer and geologist in its accomplished President Hitchcock; and it has a regular course of lectures annually on agricultural chemistry, by Professor Shepherd. Other respectable institutions are following in the same commendable track.

We are happy to add that the Trustees and Faculty of Union College, in Schenectady, N. Y., under its zealous and enlightened President, Rev. Dr. Nott, has taken the initiatory steps by the adoption of the following resolution:—"Such a change is contemplated in the course of studies in Union College as to comprehend the more useful applications of science to the arts, such as civil and mechanical engineering, agriculture, agricultural and manufacturing chemistry, &c., and also French and other modern languages. Most of these subjects have heretofore been taught to a greater or less extent; but such a change in the statutes is now contemplated, as to allow applicants the privilege of pursuing such branches of study, and *such only*, as they may desire to pursue; and to give to each student such a diploma as will express his actual attainments.

"The scheme embraces a professorship of moral philosophy and rhetoric; of ancient languages and literature; of mathematics, pure and applied; of natural philosophy, practical and theoretical; of natural history and chemistry; of French and other modern languages and literature; of agricultural chemistry, and chemistry applied to the arts; of civil, topographical and mechanical engineering; of ancient and modern history; of law and civil polity; and of anatomy and physiology."

If our agricultural journals have contributed to the advancement of these movements, as we fully believe they have done, they have fulfilled one great object of their existence. Public opinion is pushing forward these institutions to similar conclusions throughout the country; and we trust it will not be satisfied till we have elaborate professorships, ably filled and amply endowed, and connected with experimental farms throughout every leading state in the Union.

## QUERIES RELATIVE TO BARLEY.

I am informed that barley constitutes the principal food of horses and hogs in Mexico; that the latter take on fat very freely from its use; and that the horses fed on it are capable of enduring much harder service than those fed on Indian corn, and are kept in equally good condition as when fed on the same amount of other grain.

Having had my attention directed for some time to the cultivation of barley, I would be much obliged by the answers of any or all of the following inquiries:—

1. What is the amount of nutritive matter in barley, and what its nutritive power when compared with other food? (*a*)
2. How does it answer as food for horses, hogs, or other animals? (*b*)
3. What is the best variety of barley for cultivation, and proper period of sowing, in latitude 36° N.? (*c*)
4. Is it a certain crop—and if not, to what diseases and enemies is it subject? (*d*)
5. What amount can be grown per acre of land that will yield 40 bushels of Indian corn? (*e*)
6. After what crop, in rotation, will it produce best? (*f*)
7. What quantity of seed is required to sow an acre? (*g*)
8. What manures are best adapted to its growth? (*h*)

T. S. W. M.

*Belvoir, near Lenoir, N. C., June 25th, 1849.*

(*a*) The amount of nitrogen, or purely nutritive matter, in the grain of barley not dried, is estimated at $1\frac{76}{100}$ per cent.; and when dried at $2\frac{2}{100}$ per cent. The *nutritive value* of the food of our domestic animals, although a prime question in husbandry, has never, as yet, been definitely determined, as every individual employed in its investigation has differed somewhat in his result. The following is a list of equivalents, in weight, as to the relative value of several kinds of fodder, as compared with 100 lbs. of ordinary hay:—

| | |
|---|---|
| Wheat, | 41 lbs. |
| Peas, | 45 " |
| Barley, | 54½ " |
| Oats, | 55 " |
| Beans, | 61½ " |
| Clover hay, | 90 " |
| Ordinary hay, | 100 " |
| Pea straw, | 125 " |
| Potatoes, | 200 " |
| Cabbages, | 250 " |
| Carrots, | 275 " |
| Oat straw, | 300 " |
| Barley straw, | 300 " |
| Beets, | 397 " |
| Wheat straw, | 450 " |
| Bean straw, | 450 " |
| Green clover, | 475 " |
| Turnips, | 500 " |

According to other statements, 107 lbs. of wheat, 111 lbs. of rye, 117 lbs. of oats, 130 lbs. of barley,

198 lbs. of Indian corn, 177 lbs. of rice, 895 lbs. of potatoes, and 1,335 lbs. of turnips, are equal in nutritive power.

(*b*) Barley, in a green state, makes excellent spring fodder for soiling milch cows. It is also very good for horses, provided it be given sparingly at first, as it purges them; but after a little time, when the stomach becomes accustomed to it, the flesh and condition become wonderfully increased, and it is much more wholesome than their usual spring physic, as it answers the purpose of gently cleansing the intestines, without the risk of irritation. For sheep, it is more nourishing and comes earlier than rye; if fed off by them in April, it will spring up again, and, on good land, will produce a fair crop of grain.

When ground, the grain may be successfully applied to the fattening of swine, and doubtless it would serve as appropriate food for horses and other stock.

(*c*) The barley most commonly cultivated is the *two-rowed variety*, which should be sown as early in the spring as possible after the ground can be plowed and thoroughly pulverized, say in the month of March in latitude 36°.

(*d*) Barley, generally speaking, if properly cultivated, is a certain crop. The diseases to which it is subject, while growing, are such as attack other grain—the "smut," the "burnt ear," the "mildew," and the "blight."

(*e*) The produce of this grain, on land well prepared, is from 30 to 50 bushels, and sometimes more, per acre, weighing from 45 to 55 lbs. per bushel.

(*f*) In the order of rotation, barley may succeed wheat, rye, Indian corn, turnips, carrots, or a clover ley.

(*g*) From two to four bushels of seed may be sown per acre, according to the state of fertility or strength of the soil; and in this, as in all other kinds of grain, the utmost care should be observed that the seed be full-bodied and plump.

(*h*) Barley requires a somewhat lighter soil than wheat, and a heavier one than will bear tolerably good rye; but in all cases it must be well drained. A mellow, rich loam, ranging between light sand, or gravel, and heavy clay, is regarded as the best. Barnyard manure should never be applied directly to this grain, unless it be a light top-dressing of compost on indifferent soils, or in moderate quantity after the plants are somewhat advanced in their growth.

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AMOUNT OF MINERAL MATTER ASSIMILATED BY VARIOUS CROPS.—It is found, on analysis, that an acre of wheat, being an average crop, carries off with it no less than 210 pounds of inorganic elements, viz: 30 pounds in the grain, and 180 pounds in the straw—a striking proof of the importance of consuming the straw upon the land. Barley takes off 213 pounds—53 in the grain, and 160 in the straw. Oats take 326 pounds—32 in the grain, 30 in the husks, 54 in the chaff, and 200 in the straw. A crop of turnips, of twenty tons per acre, when removed off the land, carries off 650 pounds of mineral matter. Potatoes, including the tops, take off 580 pounds, the tops containing about 400 pounds. Cabbage carries off nearly, 1,000 pounds.—*Huxtable.*

## THE COW—HER DISEASES AND MANAGEMENT.—No. 16.

*Lock Jaw, or Dead Palsy.*—This disease, like many others, evidently proceeds from the application of cold when the body of the animal is overheated, and the small vessels of the surface are in an active state. Hence, it frequently follows overdriving; but, that a malady of this nature should occur, it must be connected with a certain constitutional irritability, which modifies, in a particular manner, the morbid cause.

As its name implies, this disease consists of a general stoppage of the circulation, which shows itself by the pulse being slow and irregular, and by a numbness, or loss of feeling in the whole external parts of the animal, but which is apt to be more conspicuous in the jaws, by preventing them from performing their usual functions. This disease is of a very dangerous nature, and is often attended with immediate death. In general, the internal system does not seem to be much deranged; for the animal is desirous to eat, if the state of the jaws will allow.

It may also have been observed, that the same disease is sometimes caused by external accidents, as wounds, pricks in the tendons, &c., as well as from worms in the stomach. When it arises from the latter, it is generally indicated by the worms crawling from the nostrils and mouth, and the uneasiness of the animal, as if griped in the stomach and bowels.

Before proceeding to any particular course of medicine, moderate bleeding in the neck should be resorted to, say, in quantity, not to exceed a pint or a quart. As swallowing is prevented, from the contraction and stiffness of the jaws, external applications form the next and the most efficient means of relief.

**Take of strong spirits of ammonia, 2 oz.; spirits of turpentine, 1 oz.; flour of mustard, 1 oz.; mercurial ointment, 1 oz.; opium, in powder, ½ oz.; marsh-mallow ointment, 2 oz.**

In preparing the above, the flour of mustard, opium, and marsh-mallow ointment are to be well mixed with the mercurial ointment, after which the spirits of ammonia and of turpentine are to be added by degrees, and incorporated with the whole. This application is to be made to the animal twice a-day, by rubbing in at each time two ounces or more, all along the lower jaw and neck, wherever lies the connection of the muscles of the affected parts. When relief is obtained by these means, and the jaw is somewhat relaxed, then internal medicines will strongly co-operate; but as this requires some time, immediate attempts must be made, by glyster, to assist the action of the liniment. The glyster most proper at first should be of a purgative nature, like the following—to be administered in two quarts of water gruel:—

**Take of common soap, 1 oz.; salt, a handful; sweet oil, ½ pint.**

The soap being first dissolved in the gruel, mix the whole together, and inject, with a common glyster pipe and bag, into the rectum; and, after its operation, the following may also be given as a glyster, and repeated twice a-day:—

**Take of mutton broth, 2 quarts; opium, in powder, ½ oz.; powdered valerian, 1 oz.**

The best internal medicines are opium, valerian,

and mustard, the use of which should be preceded by the following warm, aromatic purge:—

Take of sulphur, from 9 oz. to 1 lb.; grains of Paradise, 3 drachms; saltpetre, 1½ oz.; tumeric, ¾ oz.; cumin seed, ¾ oz.

To be mixed together, and given, milk warm, in two quarts of water gruel, and half a pint of molasses. This medicine generally operates briskly, and will sometimes continue for 10 or 12 hours. After its operation is over, the following may be given, at each dose, in a quart of strong camomile tea, and repeated every six hours, till relief is obtained:—

Take opium, in powder, 1½ drachms; camphor, 2¼ drachms; valerian, ¾ oz.; mustard, 1½ oz.

These applications should be accompanied by friction and heat to the surface; and the body of the animal, in general, as well as the parts affected, should be well rubbed, and covered with dry blankets so as to keep her warm.

Whenever the cause of the malady arises from worms in the stomach, evacuations by the bowels are the chief remedy. This may either be done by calomel, to the extent of one or two drachms, or by taking a strong decoction of savin; and when the evacuations are once obtained, so as to remove the cause of irritation, the medicines as last recommended above will effect a cure.

During the treatment, the cow should be frequently allowed to suck in as much as she conveniently can of a strong infusion of hay, well boiled, or water gruel; and when the disease remits, mashes may be given of bran, Indian meal, &c.

## FRESH AIR.

Man acts strangely. Although a current of fresh air is the very life of his lungs, he seems indefatigable in the exercise of his inventive powers to deprive himself of this heavenly blessing. Thus he carefully closes every cranny of his bedchamber against its entrance, and he prefers that his lungs should receive the mixed effluvia from his cellar and larder, and from a little modern patent aquarius, in lieu of it.

Why should man be so terrified at the admission of night air into any of his apartments? It is nature's everflowing current, and never carries the destroying angel with it. See how soundly the delicate little wren and tender robin sleep under its full and immediate influence, and how fresh and vigorous and joyous they rise amid the surrounding dewdrops of the morning. Although exposed all night long to the air of heaven, their lungs are never out of order, and this we know by the daily repetition of their song. Look at the newly-born hare, without any nest to go to. It lives and thrives, and becomes strong and playful, under the unmitigated inclemency of the falling dews of night. I have here a fine male turkey, full eight years old, and he has not passed a single night in shelter. He roosts in a cherry tree, and always is in primest health the year throughout. Three dunghill fowls, preferring this cherry tree to the warm perches in the henhouse, took up their airy quarters with him early in October, and have never gone to any other roosting place. The cow and the horse sleep safely on the cold, damp ground, and the roebuck lies down to rest in the heather, on the dewy mountain's top. I myself can sleep all night long, bareheaded, under the full moon's watery beams, without any fear of danger, and pass the day in wet shoes without catching cold.

Coughs and colds are generally caught in the transition from an overheated room to a cold apartment; but there would be no danger in this movement, if ventilation were properly attended to—a precaution little thought of now-a-days.—*Waterton's Essays on Natural History.*

## HINTS ON THE MANAGEMENT OF HORSES.—No. 5.

Before closing the subject of stables, we shall suggest some additions and conveniences which ought to be found in every well-arranged establishment.

*A boiling or steaming apparatus* is always advantageous, where many animals are kept, both for the health and additional vigor which an equal quantity of cooked food will yield over raw; and for the economy in feeding, wherever food has to be purchased at prices which it generally bears in our eastern markets. It requires stronger digestive powers, and a large expenditure of *vital force*, for the stomach to concoct raw food, than that which has been cooked, which is just so much subtracted from the capacity of the animal. This is an advantage always resulting in the use of prepared food, even when the animal is in good health. But when indisposed, and his digestive powers are temporarily impaired, raw food may have the tendency to aggravate, or at least prolong disease much beyond the period that would elapse, if he had a mild, nourishing aliment, that taxed his powers less. But when we consider further, that the food which has been properly prepared will yield 15, 20, or sometimes even 30 per cent. more aliment than the uncooked, we can readily determine the merits of the two systems by dollars and cents. With many articles, or at particular times, these advantages are not realized. Hay cannot, probably, from its great bulk, be steamed to advantage; but the inquiring owner will ask if some other operation may not be substituted as a preliminary to feeding it most judiciously. We answer, the cutting box can be advantageousiy used first, and, afterwards, it may be wet and allowed to remain for a few hours, to soften its dry, wiry stems, previous to being masticated. If a little salt be added, it will be more palatable; and it is well to throw into this, his ground provender, which is equally benefitted as the hay or straw by this preliminary moistening, unless, which is better, the latter has been cooked.

*If oats are fed whole*, they might be either previously steamed or soaked; but when thus prepared, the horse should first have a feed of hay, partially to fill his stomach and check his appetite, or he may be so greedy as to swallow much of the grain whole, as a result of its more tempting preparation. It is a wise provision, to secure a thorough mastication of the grain when dry, that he cannot well swallow it in this condition; and the sweet farina yields a delicious morsel when subjected to his grinders, which ensures its being retained till thoroughly saturated with saliva, thus

most effectually preparing it for the operations subsequently required by the stomach.

*When oats are cooked*, much of the sweetness of the grain is to be found in the mucilaginous liquid in which it floats, or the flavor is readily yielded by compression; and the animal, finding it so palatable and easily swallowed, rapidly dispatches the savory repast. It is better, however, first to crush or grind his grain, then to steam or boil it, when it will need but little mastication. It is then readily swallowed, and all the nutriment contained in it passes speedily into the chyle ducts, through which it is carried into the arterial system, and yields to the animal all the muscle, &c., which it contains.

*The boiler or steaming apparatus* may be according to the fancy or convenience of the owner, as to size, style, arrangement, and location. It should be removed from all danger and combustible materials, and yet be convenient both to the granary and animals. Several plans of steaming and boiling arrangements have been given in the preceding volumes of this work, and we therefore omit any particular description here.

After cooking, *care must be observed that the food be not allowed to remain so long as to ferment;* for although this process is a useful one, in many cases, to prepare food in the absence of cooking, yet it is without benefit when this has been done; and it is very liable to pass into the vinous stage of fermentation, by which a portion of the carbon of the food, (one of the essential elements of respiration,) is converted into alcohol, which is of as little benefit to the animal as to man; and this, if not checked, speedily passes into the final and destructive stage, which is even more certainly poisonous than the preceding.

When cooked, *it is better to give the food warm, not hot*, but at the temperature of his own blood; say 95° to 100° F. When thus fed, the animal soon dispatches his meal; and if previously thoroughly rubbed down, and provided with a clean bed, and a quiet, well-aired stall, he lies down to refresh his wearied limbs, and replenish his exhausted system, and on the following morning is prepared to contribute his utmost for his humane and economical treatment.

There are several little conveniences that are too frequently neglected about the stable, but which are essential to its good management. There should be a harness room for keeping the gear out of reach of dust, and where it can always be found in its appropriate place. This should be made to fit nicely, without ever galling the horse. There ought, also, to be surplus articles, as reins, bits, headstalls, girths, &c., that may be wanted to repair such as are broken or worn; blankets and buffalo robes, for winter; and saddles, riding bridles, and martingales, for occasional use; and cupboards and shelves for oil, medicines, cloths, shoes, and the like. The currycombs and brushes ought to have a secure place near the stall, or in a box under the rack or feeding trough. The groom ought to have a number of tools to execute such little jobs as are constantly required in the repair of harness, &c., and which may be done at leisure hours, in his harness room, equally as well as to resort to the shops and run up numerous little bills, for repairs.

A sleeping room, or chamber, to be occupied by one or more grooms, according to the number of horses kept, is indispensable to the safety of the establishment. Horses may be attacked with cholic, or other acute diseases, which require prompt attention. Should this occur in the early part of the night, the horse may endure agony till morning, by which time, he might possibly be beyond remedy; when, if near by, his moans and throes would not fail to arouse the groom, and immediate remedial applications might restore him to comparative health, and render him fit for his ensuing day's work. Horses frequently break loose from their stalls, when, if vicious themselves, or if they stray to such as are, much injury might result that could otherwise be prevented by prompt attention. It is not unfrequent that there are ailing animals which require oversight, or attention, later in the evening or earlier in the morning than they might receive it, but for their keeper's room being near. And in case of fire within the building, he could act with much more promptness than would otherwise be possible. But a person, thus employed, should be perfectly trustworthy, temperate, and of regular habits, or his position might produce much more injury than benefit. His room ought to be made comfortable, and, like the stables, be thoroughly ventilated. We have seen many that were more offensive than the stalls themselves, and as redolent of offensive odors as a closely-housed caravan.

In addition to having ample outlets for all the inmates in case of fire, every groom ought to be instructed, that a horse is perfectly unmanageable when surrounded by flames, and that the only chance of saving him, is, to throw a blanket closely around his eyes, when, if accustomed to obedience at the sound of his keeper's voice, he may be led out in safety. Thirty horses were destroyed in a single conflagration in this city, last winter, all of which might have been saved by a timely attention to the suggestions just made.

## CULTIVATION OF THE PLUM.

Years ago, it was common to see exposed for sale in our stores, bushels of the common blue plum. Now, such a sight is comparatively rare. A brief chapter on the cultivation of this fruit, at the outset, may convince some that they yet can be cultivated. I have had experience, and a very expensive one, too.

Plums want a favorable soil for perfecting choice trees. A moist, rich, clayey loam has thus far proved the best adapted to this fruit, with me. I never cultivate the sprouts for stocks, and never bud on them, but carefully propagate choice varieties, which have been fully proved as such, on the *strongest* and the most thrifty seedlings only. I believe no other course will ensure so perfect success. Let those who purchase trees see that they get good ones, and their success will be more certain.

If, in laying out grounds, the walks are left wider than usual, and the centre is occupied with plum trees, it would leave the amateur every opportunity for the gathering of the premature fruit. This I consider the true way of managing the plum, where a plot is not reserved exclusively for its cultivation. These garden trees can be trained espalier, or fan-fashion, if desired. W. D.

*Morristown, N. J., June*, 1849.

## CAMELS FOR TEXAS AND CALIFORNIA.

Capt. C. W. Webber, the author of "Gold Mines of the Hila," and recently in the United States' service in Mexico, called at our office a few days since for the purpose of directing our attention, and enlisting our efforts in favor of the importation of camels, for the transportation of mails, passengers, &c., throughout our south-western frontier. We have long thought favorably of this project, and that camels, equally with the best breeds of cattle, horses, sheep, and swine, should be introduced for such sections of this country as have a proper climate, and appropriate duties to require their labor. This is evidently the case with a large portion of the territory recently ceded by Mexico to us, and includes, also, a considerable portion of the prairies of Texas, and the southern portion of Oregon. Wherever the climate is sufficiently warm, as it usually is upon this continent, south of 36° of north latitude, and especially inland near the Pacific coast, where the soil is arid or sandy and the country open, camels may be used as beasts of burden to more advantage than any other quadruped.

We therefore hope Capt. Webber may be successful in his enterprise, and trust the proper energy and capital from our enterprising countrymen will not be wanting to carry this undertaking out to a full and triumphant result. We may with equal propriety embark in this, as formerly in the importation of Merino, Saxon, Bakewell and Southdown sheep; Durham, Devon and Hereford cattle; the blood and Norman horse; the ass; and improved varieties of swine.

## CAUSE OF DECAY IN TIMBER—SEASON FOR FELLING.

Considering the magnitude of the interests involved in the preservation of timber, it is surely a disgrace to us of the present day, that doubts should be as strong as ever concerning the true causes of its decay. In an absence of certainty as to these, for many years, attention has been turned away from the essential part of the inquiry, and directed merely to secondary points. The problem to be solved is, *What causes the decay of timber?*

In the first place, it is presumed that no one will dispute the fact that ancient timber lasted longer than modern. That being granted, we have only to ascertain what can have caused the difference. Our Anglo-Saxon forefathers knew nothing of bichloride of mercury, sulphate and pyrolignite of iron, chloride of zinc, nor creosote. There were no Kyans nor Burnetts, no Paynes nor Boucheries, in their days; yet, they perfectly understood the art of rendering wood imperishable, as is sufficiently attested by what remains of their works. The great, though forgotten architects, who fixed the wooden roof of Westminster Hall, in the time of Richard II., and those who erected the old country churches and corner castles of England, must have known much better than the architects of the present day how to prepare their timber; or their wood work would not have remained as sound as when it was put together by their artizans.

As ancient practice is not sufficiently recorded, we can only look to the nature of the timber itself in order to learn the causes which hasten its decay. Foremost, among these, is its exposure to *any moist atmosphere exceeding a temperature* of 33° F.; and the decay will proportionably be hastened as the temperature of that atmosphere is increased. Timber, absolutely dry, would be unable to undergo decomposition at any appreciable rate. A piece of wood found at the back of one of the friezes, at Athens, by Lord Elgin, is as sound at present as it could have been in the days of Phidias, more than 2,000 years ago. Even animal matters, rapidly as they putrify, are preserved for centuries in the absence of moisture. Travellers assure us that in the arid plains that stretch northwards beyond the Himalayan range, the corpses of men and the carcasses of animals dry up instead of rotting. The Gaucho hangs his beef in the sun, and in the dry climate of the Pampas it hardens as so much hide, like which it may be kept for use.

If then, mere dryness is sufficient to arrest the decay of animal matter, how much more effectual must be its action upon vegetable substances in which a natural tendency to rot is infinitely less inherent. Sawdust is but timber broken to pieces; damp sawdust rots rapidly; dry sawdust will all but last forever. Charcoal, one of the most unchangeable forms of vegetable matter, is only timber from which the last trace of water has been expelled by heat. Absence of moisture is therefore the great cause of preservation, as its presence is that of decay.

Complete dryness may be assumed to have been the cause of the durability of ancient timber. At least, in the present state of our information, we can refer it to nothing else; and dryness is amply sufficient to account for it. In the opinion of one of the most experienced and philosophical of modern writers, the late Sir Samuel Bentham, dryness was the great object to be obtained in preparing timber for naval purposes. Drying houses were recommended by him; and during all the period of his employment as civil architect of the British navy, this distinguished officer never ceased to point out the indispensable necessity of securing the dryness of timber before all other things. To the artificial methods available for this purpose we need not here allude. What we have to deal with is the natural means of bringing it about. Those natural means are much more effectual than any others, and it is a question whether they can be superseded by any artificial method whatsoever. The means which trees possess of relieving themselves from moisture are their leaves, which serve as a very powerful pumping apparatus, incessantly drawing moisture from their interior, and giving it off to space. It is true that the same action which produces a discharge of fluid from the surface of leaves has at certain seasons the counter effect of again charging the apparatus with more fluid, to replace that which is thrown off; but this happens only at certain seasons. In spring, a tree is in full force; the roots then draw fluid from the soil, the trunk draws it from the roots, leaves draw it from the trunk—and waste it; and this goes on so long as the soil is filled with the rains of spring—so long as vitality is active. But as the summer advances, the earth becomes dry, refuses the same abundant supply as before, and all vegetation slackens. The leaves, however, still go on, pump, pump, pump;

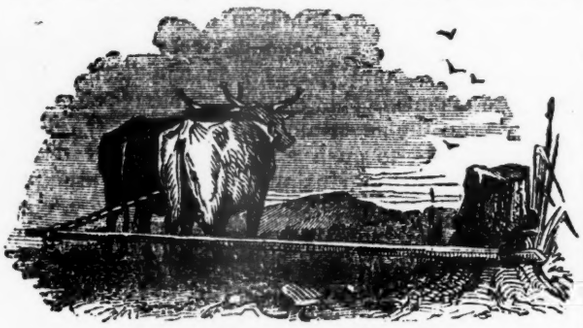
till at last, the roots becoming torpid, the leaves draw off all the free fluid that the trunk contains; and when the last supply that it can yield is exhausted, they perish. At that time, the trunk, by natural means, is dried to a great degree; the free water lying in its cavities is gone; and the whole fabric acquires a hardness it did not know before. Until the leaves are renewed in the succeeding spring, but small internal change occurs; the roots are torpid and will scarcely act; the pumps are broken; and little more fluid is introduced into the wood. Hence it is obvious that the period when the timber of a tree is naturally free from moisture and therefore least prone to decay, is between the fall of the leaf in autumn, and the renewal of vegetation in the spring; and the nearer the fall of the leaf the most free.

In this point of view, timber which is intended to be durable should be felled late in the autumn or in mid-winter. No artificial processes will relieve it of its moisture so economically and so well as the means which Nature has provided, On the other hand, if it is felled when the tissue is full of fluid, it is much to be doubted whether any artificial methods of exhaustion are capable of seasoning it properly. B.

## STUMP PULLERS.

Various have been the contrivances for the extraction of stumps from new lands; but as they have usually been constructed on the principle of the windlass, or capstan, they have generally been too expensive, and often too unwieldly, for profitable use. As a simple method, within the reach of all, at a trifling cost, we would recommend the following for removing large stumps.

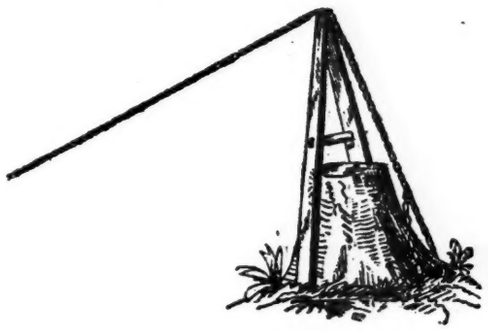
Procure a lever, made of dry lever wood, hornbeam, or red elm, about twenty-five feet long and six or eight inches in diameter, and two yoke of oxen, with a good stout log chain, to apply to the stump, and two other chains, for attaching the oxen to the lever. This is all the *machinery* necessary, which may be operated in the following manner:—



Stump Pulling.—Fig. 67.

Put the log chain around the stump, a little above the ground, and make what is called a "log hitch;" lay the lever horizontally on the ground, with the large end tightly confined against the stump by means of the chain; then hitch the cattle to the small end of the lever, and drive them round the stump in a circle, of which the lever is the radius. Less than one revolution round a stump will generally twist it out of the ground; but, should not the power thus applied be sufficient to draw the stump, then the side roots may be uncovered and part of them cut off, when it will be easily removed.

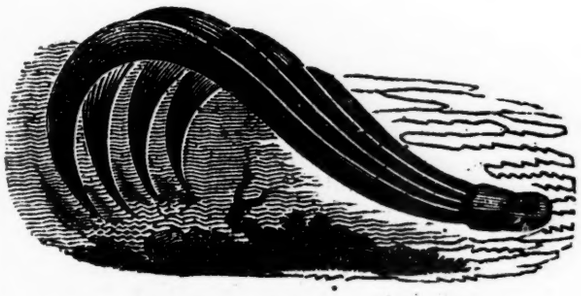
The cut below, Fig. 68, also represents a very cheap and efficient stump machine described in the "Albany Cultivator." It consists of two pieces of hard timber, six inches square by two feet in length, firmly fastened at the top by a strong band of iron, with a cross-piece in the middle, in the shape of a three-cornered drag. When applied, it is set astride the stump, with a strong eighteen-foot chain fas-



Stump Machine.—Fig. 68.

tened to the top of the machine, and to a root on the back side of the stump from the team. Two yoke of oxen, it is stated, will pull out almost any common stump that has been cut from three to four years.

Another very useful implement, to attach to small stumps, bushes, clumps of roots, and bogs, for the purpose of pulling them out of the ground, is denoted by Fig. 69. It is made entirely of iron,



Bush or Root Puller.—Fig. 69.

with two, three, or four claws. These are hooked to the stump, or bush, close to the ground; the cattle are then hitched to it by a chain, by which the stump or bushes are easily hauled out. In clearing or grubbing ordinary land, this machine, with a pair of oxen, will do the work of half a dozen men.

Do King Birds Eat Working Bees?—The king bird has been regarded as one of the greatest enemies of the apiarian, in some situations, from the fact that it is a devourer of bees. Wilson, the ornithologist, suggested that the bird only picked out the drones, and never injured the working bees. Other close observers have come to the same conclusion. One writer states that to test the matter, he killed a number of the birds, and though he found many drones in their crops, he could find no working bees in them.

### TOPPING INDIAN CORN.

In your article in the July number of the Agriculturist, on work for July, north and west, under the head of "Topping Indian Corn," you state the opinion of many to be that the practice is an idle waste of time, and injures the quality of the grain. With regard to its injuring the grain, I have but one idea to advance, and that is this: You may take a field of ten acres, top one half of it, at the usual time of topping; that is, when the milk of the grain is beginning to harden, and let the other half remain untopped, and leave it in that state until fit for cribbing, and you will find that part of the field not topped, from seven to ten days in advance of the part topped.

Now, to condense my idea, as above stated, in a few words, I will simply state that when the milk of the grain is beginning to harden, that part of the stalk above the ear is a useless appendage; for, on removing it, it immediately withers and dries up for want of the nourishment it has received from the part below the ear. This fact clearly accounts for corn that has been topped not maturing so soon as that having the tops on. The sap that once made ear and stalk above the ear, is now all employed in making and filling out the grain, thus making it more perfect and plump. J. B. L.

*Brookville, L. I., August 1st, 1849.*

### THE BUTCHERIES OF NEW YORK.

It is quite time our city fathers proceeded efficiently for the removal of these intolerable nuisances. The stench from these yards is perfectly unsupportable, and has its full share in bringing, augmenting, and continuing the plague of cholera within our city. Let any man go through miles of our streets, in the upper portion of the city, on a hot day, and he will almost *feel* the fetid breath, as it ascends from these receptacles of blood and offal. We would forego the use of meat six months in the year, and so, too, would half the citizens exposed to the noxious effluvia, rather than submit to it.

These pestilent butcheries have no business on this island, and they ought, within reasonable time, to be totally removed from it. Why pay more deference to the charnel houses of cattle, than to those of our own species? By almost universal consent, no burials are permitted below the Trinity grounds, near 200th st., some eight miles above the south end of the city—yet they are incomprehensibly less objectional. There, decaying matter is buried, four feet at least below the surface. In the other case, it is left to stagnate above ground, pollute the air with its poisonous miasma, and soak into the surface as it leisurely steals along, for miles on miles, through the gutters. During the afternoon and evenings, our streets absolutely run with blood, and yet there is enough left, with other offal, to create a pestilence in every neighborhood where they exist (and where don't they, in any part of the city, save the most business portion, or a favored and comparatively small part of it, occupied by the wealthiest classes?)

The remedy for all this, (and without mitigating the excessive carnivorous habits of our citizens—a characteristic in which they are not exceeded by any body of savages on the face of the globe,) is simply, a total and entire removal of every butchery from the island. Put salt water between these death-dealing, blood-spilling, stench-creating, pestilence-producing establishments and other civil pursuits. And where shall they go? is the very pertinent inquiry. To the Jersey shore, and the northeastern side of the Harlaem River. All the animals driven in for slaughter, pass these points to reach the city; and those floated to us by water may as well debark there as elsewhere. Or they might be located on any railroad leading to the city; and at a distance of even 20 or 30 miles, they would still be within an hour's ride.

The animals would thus have time to refresh themselves, and resume that quiet, healthy condition, so essential to render their meat wholesome. It has been proved that meat slaughtered during the later hours of night, will keep much longer than if killed during the day. This is the result of the diminished action of the arterial system, when the pulse is least excited; and consequently, it will approximate to this condition, just in proportion to the quiet and repose of the animal at the time he is killed.

The above arrangement would remove from us another intolerable nuisance, in the droves of feverish, excited animals, that frequently break loose, and, goaded to madness, rush wherever they will, often endangering life and limb. If these establishments are clustered together, as they ought to be, ferry boats can bring to the city the prepared carcasses only, leaving the tallow, the offal, and much of the bones, to undergo such preparations as may be necessary to fit them for use. This would necessarily carry with them the tallow melters, soap-boilers, glue manufactories, bone cleaners, and tanneries; and if they needed any assistance to remove their odoriferous appendages towards the raw material, we would give them the full benefit of the municipal levers to aid them in their meritorious undertaking. Distilleries, also, might be advantageously added to the above list.

Now, why should not this be done by the strong arm of the law, impelled, as it would be, by the sustaining voices of nineteen twentieths of the intelligent citizens? Echo answers, why? Our worthy and efficient mayor has made some good moves in cleansing this Augean stable of ours, and he needs but the sustaining influence of our reflecting inhabitants, to push every well-merited reform to a successful conclusion. If this is promptly and generally afforded, the work will be accomplished—if not, not—and there an end; and we must continue to jog on, like beasts of prey ourselves, surrounded by the decaying offal of our own gluttony! A beautiful comment, this, on the progressive improvement, intelligence, and humanity of our self-lauding race.

This exodus of stenches, must carry with them an important and salutary change in the management of fresh-meat exchanges. Animals would be purchased by fewer persons, and in larger numbers; they would have extensive and permanent ranges of sheds, buildings, and yards; their arrangements and appointments would be vastly more convenient and complete; and their operations would be perfectly systematized and much more economical. It would, in a measure, tend to a division—an advantageous division of labor. One man would then purchase

for slaughter, what twenty men now do; certain establishments confining themselves to particular descriptions of animals, for which their arrangements would be entirely adapted. The preparation of these for market, would necessarily be more advantageously done, than if a few mixed animals were huddled together, as of bullocks, calves, sheep, or swine. When thus prepared, another class of dealers, those who sell in market, would come in, and take the dressed carcasses for retailing. Each, it is evident, could thus make more money, if they buy and sell at present prices, than either could do separately; but the result would probably be, that in consequence of the greater economy and dispatch thus secured, the article would be furnished at cheaper rates to the consumer.

Another vast advantage would result in a proper disposition of all the blood and offal. What now is made the destruction of health and life, would, by proper arrangements, be made most effectively to sustain both. There are probably 80,000 bullocks, 70,000 calves, 150,000 sheep and lambs, and 50,000 swine annually butchered within the city, to say nothing of horses, dogs, cats, and smaller game. If all the refuse of these, not consumable as food or in the arts, could be composted with peat, charcoal, plaster of Paris, sawdust, tanbark, turf, and the like, the product would be rendered inodorous, and when properly decomposed, might be carried upon the land, where it would afford mines of wealth to the farmer, the market gardener, and the fruit or ornamental horticulturist. The beneficial result of this arrangement would be felt in the increased supply, the improved quality, and diminished prices of our fruits and vegetables. The blood and offal from the above number of animals would yield sufficient, if properly composted, to manure 10,000 acres of land, in the most ample manner, and its value could not be estimated at less than $200,000 annually. Here would be a vast yearly profit to some one, which is now worse than thrown away. The consumption in the city of grown bullocks alone, has been increasing at the rate of 5,000 per annum for the last three years, and other animals in the same ratio. How soon, at this rate, will it require a small city itself, to contain the butcheries and their kindred occupations?

What a splendid arrangement could be effected with this whole subject, grown to the size it now is, if under the exclusive control of one intelligent mind. And American citizens can accomplish more than an autocrat, when they form a well-concerted and combined movement. What well-arranged streets and lanes; ample, shaded, and well-paved yards; thorough drainage; complete fixtures and rooms for slaughtering! What ample, well-aired, convenient receptacles for the display and wholesale disposal of their fabrics! Here would be a fine field for the study of disinfectants by the man of medicine; and an equally desirable one in the science of composting, for the agricultural chemist; the practical butcher would resort thither for the renewed study of his art, which he had found had all been learned wrong before; and even the man of refinement and rural taste might receive a pleasure from the combination of perennial lawns, tasteful shrubbery, and graceful woodlands, interspersed amid the charnel houses of the quadruped—something akin to that imparted by straying among the mouldering relics of humanity. They would lack the sentiment and association which attaches to a Greenwood or Mount Auburn; but they would at least assure us, that the most revolting occupation necessary to fallen man, would, so far as practicable, be shorn of its most odious features and accompaniments.

## SOUTHERN PLANTING—COW PEA—COTTON SEED, ETC.

THE above caption I transcribe from the heading of an article in your May number, written by Col. Hampton. This paper is worth a great deal to me. It supports me, in the views I first started, in your columns, in 1843–4, and afterwards in the Southern Cultivator, for which I have received by the correspondents of the latter, full many a belaboring. I presume, now, with Col. H. as a leader, that I may assure all planters of the cow-pea family, that they would do well to take advice and be cautious. I have planted a great many varieties of this pea, and to get the "red-ripper"—the same as the "red-winter" pea, of Col. H., I begged Governor Hammond to send me a barrel, which he of course did. I have now as many kinds of peas for experimenting as has any one, kindly sent me by J. V. Jones, of Georgia, and Robert Chisholm, of Beaufort, S. C.

I sow peas for their shade and manure to my land, and have no idea of using them hereafter, except for store hogs. I expect to fatten 75 or 80 hogs this winter, and will have pindars and potatoes enough to do so. I made, last year, 8,000 lbs. of pork, and hope to put up 15,000 lbs. this winter. The past season, I hauled out, with ten hands, 100 four-horse loads of manure, and cotton seed, say ten loads to the hand, and had I not undertaken to do too much fencing, &c., I would have doubled my manure. Fifty head of hogs gave ten large loads of manure, by using close pens 9 by 30 feet, and littering heavily with corn stalks. I am trying what manure and close planting with corn will do. I do not expect to succeed fully, as I do not intend the spot for corn until after breaking up.

M. W. D——

*Edwards' Depôt, Miss., May, 1849.*

## CURING PORK IN WARM WEATHER.

IN the March number, at p. 92, of the current volume of the Agriculturist, Mr. Robinson cites a Mr. Smith's reasons why pork is not made south to a greater extent, from the difficulty of not having "sufficiently cool weather, at killing time, to save the meat."

With respect to the gentleman belonging to so extensive a family, I would state that I know a Mr. *Smith*, who always has the best of meat on his table—good sweet ham and pork, the latter from two to six inches thick—and he never cares for the weather, nor wishes his meat to get cold before it is cured, but kills, and packs it down, not only the same day, but the same hour it is butchered, if the time permits. He thinks, if not allowed to freeze, the salt will penetrate it so freely that it will cure quicker and much better than it otherwise would do.

D.

*Morristown, N. J., July 14th, 1849.*

## PROGRAMME OF THE TWENTY-SECOND ANNUAL FAIR OF THE AMERICAN INSTITUTE.

EXHIBITORS of samples or specimens for premiums, excepting cattle and other live stock, agricultural and horticultural productions, &c., are required to bring them to Castle Garden, in the city of New York, and receive a certificate from the Clerk of the Fair, on Friday and Saturday, the 28th and 29th of September, previous to opening of the exhibition.

### FIRST WEEK.

*Monday, Oct.* 1,—Will be appropriated for the arrangement of the contributions. Vegetables, Fruits, and Flowers, for the Horticultural Room, should be brought this day, before 12 o'clock.

*Tuesday, Oct.* 2,—The exhibition will open to the public at 9 o'clock, A. M., and close at 10 o'clock, P. M., which arrangement will continue during the fair. The opening address will be delivered this evening, at 7½ o'clock, in the front saloon. A band of music will play during the evening. At 9 o'clock, a grand display of fireworks.

*Wednesday, Oct.* 3,—The steam engine, with moving machinery, will be in operation, and continue during the fair.

*Thursday, Oct.* 4,—Spading match, plowing, and testing of plows, at Flushing, L. I., in conjunction with the Queen's County Agricultural Society. Steamboats will leave the Battery at an early hour for the plowing ground An address on the field.

*Saturday, Oct.* 6,—Fireworks this evening at 9 o'clock.

### SECOND WEEK.

*Monday, Oct.* 8,—Great show of choice roses and dahlias at 12 o'clock, for special premiums. Cattle and other live stock to be exhibited on Wednesday, must be entered on the books this day, and pedigrees delivered to the clerk, at the Committee Room at Madison Cottage, corner of Fifth Avenue and Twenty-third street. If previously sent to A. Chandler, Superintending Agent of the Institute, they will be attended to.

*Wednesday, Oct.* 10,—The cattle show will [illegible] o'clock, A. M., at Madison Cottage, corner of Fifth Avenue and Twenty-third street, when all the animals must be on the ground.

*Thursday, Oct.* 11,—The second and last day of the cattle show. The Hon. Levi Woodbury will deliver the anniversary address at the Tabernacle, at 7½ o'clock P. M. Tickets, gratis, may be had of any of the managers, or at the clerk's desk. Music by an accomplished choir, under the direction of Mr. George Andrews.

*Saturday, Oct.* 13,—Pyrotechnic exhibition in competition for premium, at 9 o'clock, P. M. Each exhibitor will be required to fire three pieces. Entries to be made on the books before 12 o'clock, M.

The programme of the third week and notices of aquatic exhibitions, addresses, and other interesting exercises and displays, in addition to those named above, occurring from day to day, will be published in the city papers.

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CHEAP MODE OF FATTENING HOGS.—Allow them to run at large, and teach them to break into your neighbor's corn field every night.

## COMPARATIVE ANALYSES OF BONES PREPARED BY STEAM AND BY CRUSHING.

AT the monthly meeting of the Highland and Agricultural Society of Scotland, in February last, a new method of reducing bones to a high state of division was submitted by Mr. James Blackhall, of Edinburgh. His process, the details of which have been published in different agricultural journals, consists in exposing the bones for a certain length of time to the action of high-pressure steam, by which, according to Mr. Blackhall's statement, they are brought into a much higher state of division, and at a much less cost, than by the ordinary method of crushing. Mr. Blackhall's original idea was, that the bones were thus dissolved, and he conceived that his process would replace the common method of solution by means of sulphuric acid.

The following are the results of two analyses of bones by Dr. Anderson, the society's chemist, prepared by the new process—No. I. by Mr. Blackhall, and No. II., which was sent to the laboratory for analysis, by George Cranstoun, Esq., of Corehouse:—

| | I. | II. |
|---|---|---|
| Water, . . . | 12.66 | 13.86 |
| Animal matter, . | 27.37 | 19.90 |
| Bone earth, . . | 59.97 | 66.24 |
| | 100.00 | 100.00 |

In order to form a correct estimate of the advantage of Mr. Blackhall's method, it is necessary to compare the composition of these bones with that of those prepared by the ordinary process, as it is very evident that a certain proportion of the gelatine, or glue, which is very soluble in boiling water, must have been extracted by the steaming. In looking into the subject, however, Dr. Anderson was unable to find any analysis of bones in the state in which they are used as a manure, and he found it necessary to analyze several specimens of agricultural bones, of which the following are the results:—No. I. were drill bones, in pieces about an inch in length. No. II. ordinary finely-crushed bones; and No. III. the entire bones in the state in which they are sold to the bone crushers by the persons who collect them:—

| | I. | II. | III. |
|---|---|---|---|
| Water, . . | 10.00 | 10.39 | 14.79 |
| Animal matter, . | 41.88 | 42.60 | 37.02 |
| Bone earth, . | 48.12 | 47.01 | 48.19 |
| | 100.00 | 100.00 | 100.00 |

From a comparison of these analyses with the former, it is manifest that they contain much more animal matter than the steamed bones, the amount averaging 40 per cent.; while in the latter, in one case, we have only half that quantity, and in the other about 27 per cent. Now it must be very clear that, in the production of a ton of steamed bones, it is not sufficient to reckon the mere cost of steaming in addition to that of the crude bones, but that the loss of animal matter must be taken into account. Supposing the crude bones to contain exactly 40 per cent. of animal matter, a very simple calculation shows that they must lose 25 per cent., in order to yield a substance which shall contain 20 per cent. of animal matter. Supposing,

then, that the crude bones cost £4 per ton, the same quantity, as prepared by Mr. Blackhall's process, would cost £5, 6*s.* 8*d.*, independently of the cost of steaming. It is true that the whole quantity of the phosphate of lime will remain in the bones, but it must be recollected that the gelatine which is extracted is a very valuable manure, and extremely rich in nitrogen, so much so that Boussingault, who has given a comparative table of the value of manures, founded upon the amount of nitrogen they contain, estimates, (irrespective of the phosphate of lime,) six parts of bones as equivalent to 100 of farmyard manure. Now, by Mr. Blackhall's method, the animal matter extracted must be entirely lost, or it must be recovered by evaporating the condensed steam, or, in the event of the quantity of water being sufficiently small, by converting it into a compost. Any such operations, however, must, to a greater or less extent, add to the original cost of the bones.

It is quite possible that, by the use of a proper steaming vessel, the quantity of gelatine extracted may be reduced considerably under what it was in either of the specimens analysed, but it admits of question whether this very extraction may not be connected with the softening process. It is well known, at least, that bones, from which all or nearly all the animal matter has been extracted by boiling in water under pressure, are so soft that they may be reduced to fine powder by rubbing between the fingers. On the other hand, it is necessary to mention that, in an experiment performed by Mr. Slight, of Edinburgh, with high-pressure steam, of 35 lbs. to the square inch, the softening was not by any means so great as Mr. Blackhall described, as the bones retained their form, and required the use of a cake-breaking machine to reduce them to powder.

These are disadvantages which are like to limit considerably the value of Mr. Blackhall's process; but it may, notwithstanding, prove valuable in remote districts, where small quantities of bones may be collected at such a distance from a bone mill as to render it impossible to transport them to it. The superiority of steamed bones as a manure is a question which can be properly determined only by experiment in the field, and it is not impossible that good results may be obtained from them, though they can never form a substitute for bones dissolved by an acid.

## REMARKS ON THE NUTRITIVE VALUE OF CORN COBS.

It is well known that the manure of an animal varies in quality with the food which it eats; and that generally manure is richer in nitrogen bodies, and less rich in non-nitrogenized matter than the food consumed. Probably a greater proportion of 100 lbs. of nitrogen bodies would be assimilated by the system, if it were mixed with 500 lbs. of non-nitrogenized matter, and still more if mixed with 1,000 lbs., than if taken into the system undiluted or alone. It should be borne in mind that it is as essential for food to contain bodies destitute of nitrogen, (such as starch, sugar, oil, &c.,) or those which go to support animal heat and respiration in the body, as it is for it to have nitrogen compounds to nourish or supply the waste of the living tissues. Hence food, suited best to sustain animal life, is that which is made up of these two classes of bodies, mixed in the proper proportion. And a deficiency in the one is equally as deleterious to the healthy existence of the animal as a deficiency in the other; therefore we can hardly say that one of these classes is in reality more essential to the maintenance of life than the other. They both seem to perform equally important offices. If this view be taken, the cob cannot be regarded as deficient in those bodies which contribute to support respiration and nutrition.

The table below shows about the amount of the several proximate organic bodies thrown away in rejecting the cob, calculated from the analysis of the small white-flint variety. 1,000 lbs. of ears contain not far from 200 lbs. of cob and 800 lbs. of grain. These contain the following bodies in the following proportions, expressed in pounds and decimals of a pound:—

| | 200 lbs. Cobs. | 800 lbs. Grain. | 1,000 lbs. Ears. |
|---|---|---|---|
| Sugar and extract, | 13.662 | 115.320 | 128.902 |
| Starch, | 0.003 | 487.384 | 487.387 |
| Fiber, | 127.687 | 7.712 | 135.399 |
| Oil, | | 39.824 | 39.824 |
| Zein, | | 31.856 | 31.856 |
| Matter separated by potash from fiber, | 45.404 | 51.856 | 97.360 |
| Albumen, | 1.518 | 37.136 | 38.654 |
| Casein, | 0.288 | 0.688 | 0.976 |
| Dextrine or gum, | 2.310 | 28.224 | 30.534 |
| Resin, | 1.806 | | 1.806 |
| Glutinous matter, | 7.402 | | 7.402 |
| | 200 lbs. | 800 lbs. | 1,000 lbs. |

In the above table, the inorganic matter is not separately considered, it being distributed among the several organic bodies. By rejecting the cobs of 1,000 lbs. of dry ears, about 200 lbs. of organic matter is lost, which consists of 13½ lbs. of sugar and extract, 127½ lbs. of fiber, 45½ lbs. of matter separated from fiber by a weak solution of potash, 1½ lbs. of albumen, 0.288 of a lb. of casein, 2.31 lbs. of gum or dextrine, 1.8 lbs. of resin, and 7.4 lbs. of glutinous matter. Hence the cob, although not rich in nutritive matter, can by no means be said to be destitute of those proximate principles which go to support respiration and sustain animal heat, and those which are capable of being transformed into nerve, muscle, &c., and the phosphates which contribute so largely to the formation of bone.—*N. Y. State Transactions, for* 1848.

## RULE FOR CONSTRUCTING CHIMNEYS.

A very erroneous practice prevails, among chimney builders, of contracting the passage for the smoke at the lower part near the fire place. "This," says Treadgold, "is like contracting the aperture of a pipe which supplies a jet." Chimneys, to draw well, should be contracted at the top. The rule for ascertaining the required degree of contraction is as follows:—

Let 17 times the length of the grate, in inches, be divided by the square root of the height of the chimney, in feet, and the quotient will be the area in inches, of the transverse section of the aperture at the top of the chimney. For example, a grate 15 inches in length, with a chimney 36 feet high, to which the contracting top is required—17 multiplied by 15 gives 255, which number divided by 6, the square root of 36, gives 42½ inches for the area of the top.

### SHORTHORNS vs. THE NATIVE BREED.

MUCH has been written and much more said since the improvement of our native cattle commenced in this country by a cross with the shorthorns. I have been surprised at the apathy, and I might say, total indifference of most of our farmers on this important subject; to say nothing of the opposition of a few of them to any improvement whatever as being necessary in our native breeds.

My mind has been directed to this subject by having seen and compared many of the droves which have passed from the west on their way to New York, since the 1st of March, up to the 1st August. Mr. George Stewart, of Morristown, New Jersey, has furnished me with a list of each drove, which he obtained from the drover, as the cattle passed, and they amount to 10,983 head. Of these, the greatest part were from the state of Ohio, fattened in the Scioto Valley; and the remainder, were from Kentucky, mostly a cross with the shorthorn descendants of the old importations of 1817, together with all the later importations by Mr. Clay and others. Those from Ohio were from the Ohio Company's importation, and others brought in from different sources, which have been bred from. Between the blood cattle, in the states of Ohio and Kentucky, there is no great difference. I have visited the principle herds in both states, and where attention has been paid to the selection of the best bulls, there appeared to be about the same degree of excellence. But what surprises me most, is, that every man who calculates to raise a calf does not put his cow to a shorthorn bull, whether it is intended for the shambles or the pail. The value of the animal is increased at maturity, on an average, ten dollars, and in many instances much more, over and above that of the price of the animal crossed upon. I speak advisedly on this point and will appeal to a test at the Bull's Head, in New York, for a confirmation of my assertion.

Great expenditures have been made and are still making to procure this breed of cattle from England, and the stock may now be had at reasonable prices in sufficient numbers to cross with our native stock in all those parts of the country where it would be advisable to be done; that is, only where feed is abundant. In short pasture, the Devons do much better. SAMUEL ALLEN.

*Morristown, N. J., August*, 1849.

### TAPLIN'S HORSE POWER.

ONE of the best horse powers with which we are acquainted, is that more commonly known among us as the circular, or Taplin's. Fig. 70 gives a good idea of it. It has a wooden rim, or circle, from 18 to 20 feet in diameter, to which iron segments are bolted on the under side. These gear into a cog wheel, hung upon a shaft on which, also, a drum, or wheel, is attached. This shaft, revolving, moves the machinery by a belt. If preferred, the drum and shaft can be

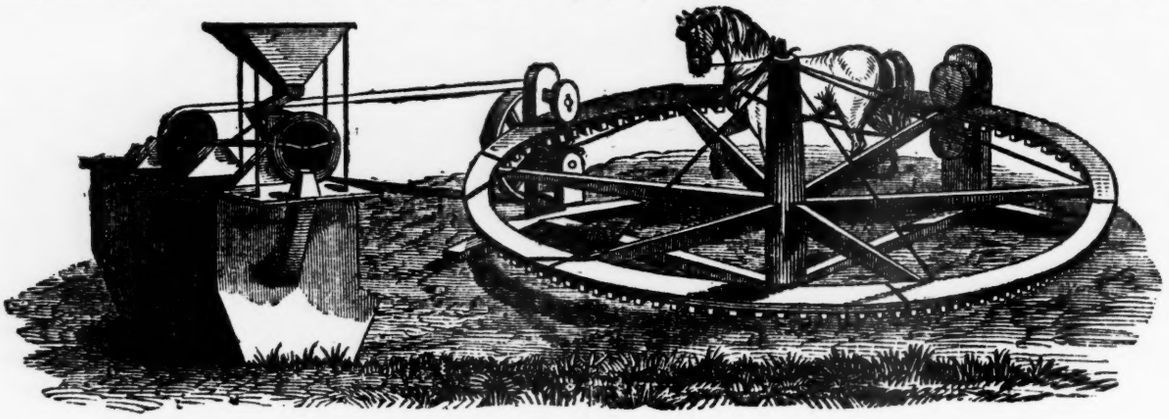

FIG. 70.

dispensed with, by gearing a cog wheel, attached to the machine to be propelled, into the cog wheel of the horse power. The horses are attached to whiffletrees, hooked to the arms, close where they join the rim, and thus move the power as they travel round. It can be transported easily from place to place in a common farm wagon, and may be set up in twenty minutes, and taken down in half that time. It is simple in its construction, not liable to get out of order, and when so, is easily repaired. It may work in the open field, though it is better to have it under cover, when stationary, especially during stormy or very hot weather.

When the team is to be attached to this power, take the pin out of the standard which keeps the rim upon a level, and lower one side of the rim to within two feet of the ground; now step a horse over; then swing it round to the next hook for a whiffletree, and step over another horse, and so continue till as many are put on as are wanted.

For efficiency, durability, and simplicity, we prefer this power to all others. Price $75 to $80, according to size and quality. For sale by A. B Allen & Co., 189 and 191 Water street, New York.

RAISING SWEET POTATOES FROM SEED.—The yam-potato vines bloom in August. In about a month after, they form a pod. The seeds are then formed of about the size of sage seed, and of the same color. The pods should be noticed and gathered when ripe, or else the seeds will soon drop. In the spring, at the usual time of sowing, they may be sown in the same way as with cabbage seed. They will not come up quite so soon, but will continue doing so through the spring. The plant is small and delicate in appearance, and should be drawn in a wet season, with a little dirt attached to it, and transplanted. The leaf and vine have a different appearance from the potato, and the tubers will be found to grow larger and smoother than when cultivated the usual way.—*Recorder Supplement, Georgia.*

REARING AND MANAGEMENT OF POULTRY.—No. 1.

It is a mooted point, as yet, I believe, amongst farmers, how our domestic fowls can be made to net the most profit; still, I think the opinion is fast gaining ground that a good hen house, with a large range attached, is the true way—at any rate, it has been stated, on good authority, that "poultry, kept for profit, should never be allowed to roam at will, leaving their eggs here and there to rot, nor furnish food for foxes, weasels, and skunks."

When we consider that the value of the poultry annually raised in the United States is $12,000,000, it is surprising that this branch of domestic industry is looked upon as of so little importance; and as it is in the province of your journal to keep this and all kindred subjects before the people, it is desirable that you insert a series of practical articles upon the "Rearing and Management of Poultry," from the shell to the spit, similar in character to those now in course of publication on the horse, the cow, and swine. I think there is no doubt, that, if they were furnished, they would prove very acceptable to a large number of your readers, and would be productive of much good. J. B. D.

*Boston, August*, 1849.

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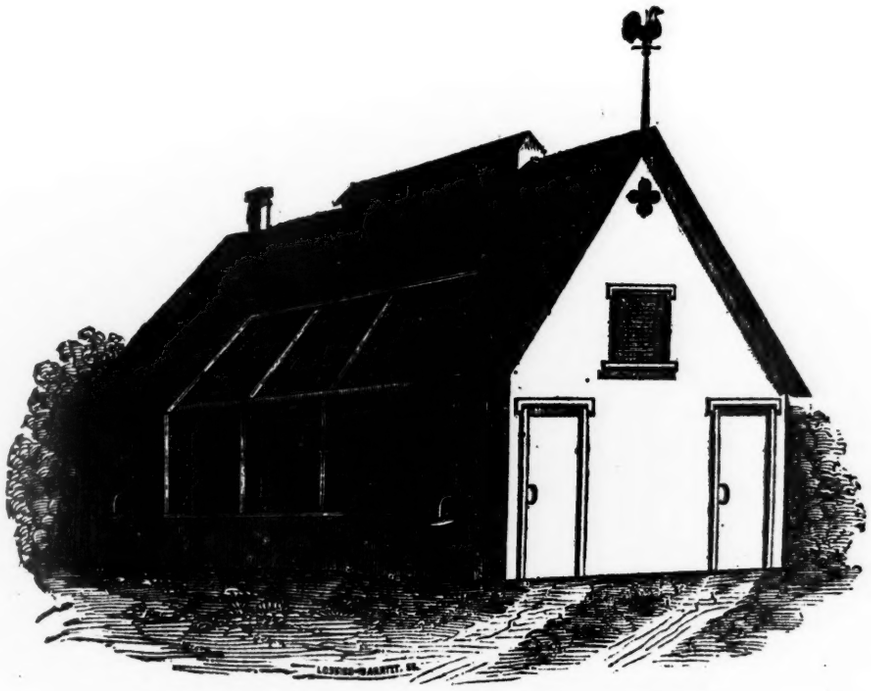
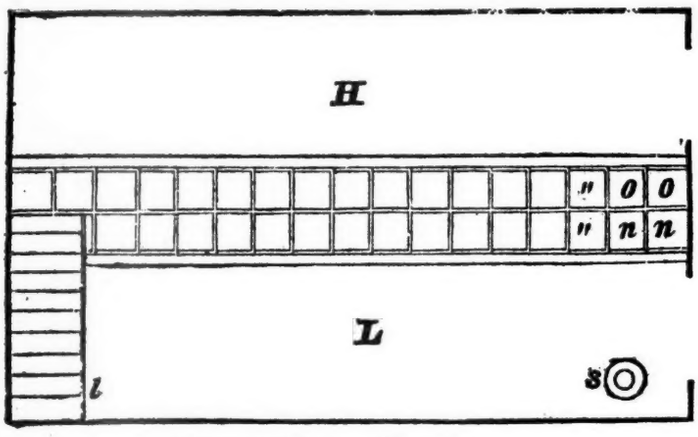
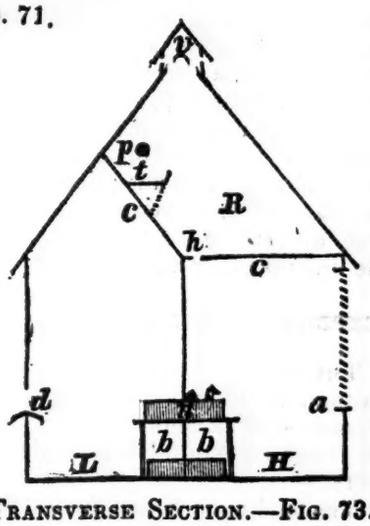
We think the suggestion of our correspondent an important one; and we will endeavor to impart



PERSPECTIVE VIEW OF A HEN HOUSE.—FIG. 71.




GROUND PLAN.—FIG. 72.




TRANSVERSE SECTION.—FIG. 73.

to our readers as much information on the subject as our knowledge and experience will afford, and the limits of our pages will allow.

*Description of a Hen House.*—Fig. 71 represents a hen house, in perspective, 20 feet long, 12 feet wide, 7 feet high to the eaves, with a roof having a 7-foot pitch, a chimney top, a ventilator on the peak, twelve feet in length and one foot or more in height, and openings in the gable ends for the admission of fresh air. In the easterly end, there are two doors, one leading into the laying apartment and loft, and the other into the hatching room. In the same end there is also a wooden shutter, or blind, which may be opened, whenever necessary,

to let air or light into the roost. In the back, or northerly side, there is a large lattice window, three feet above the floor or ground, 4 by 12 feet, for the purpose of affording fresh air to the sitting hens. In the front, or southerly side, there is a large glazed window, 4 by 12 feet, and another in the southerly side of the roof, of a corresponding size, designed to admit the light and heat of the sun, in cold weather, to stimulate the laying hens. In the southerly side, there are also two small apertures three feet above the floor or ground, for the ingress and egress of the fowls. These openings may be provided with sliding shutters, as well as with "lighting boards," inside and out, and may be guarded by sheets of tin, nailed on below them, to prevent the intrusion of rats, weasels, or skunks.

The building may be constructed of wood or other materials, and of such style, or order of architecture, as may suit one's taste, only preserving the internal arrangements and proportions, in reference to breadth and height. As a general rule, as regards the length of the building, each hen, irrespective of the cocks, may be allowed a foot.

Fig. 71 shows the ground plan of the above, in which *L*, denotes the laying apartment; *H*, the hatching room, each 6 by 20 feet; *n*, *n*, *&c.*, nest boxes for laying, 14 by 14 inches, and 10 inches deep; *o*, *o*, *&c.*, nest boxes for the sitting hens, of the same size; *l*, a ladder, or steps, leading into the loft; and *s*, a stove for warming the apartment, if desirable, when the weather is cold.

Fig. 72 shows a transverse, or cross section, of the building, from the bottom to the top, with the internal arrangements. *L*, denotes the laying apartment, and *H*, the hatching room, divided in the middle by a partition; *n*, the nest boxes, resting on tables, three feet above the floor or ground; *b*, *b*, boxes, or troughs, containing water, grain, brick dust, sand, ground oyster shells, or other materials for the convenience of the fowls; *d*, an aperture, or door, three feet above the ground or floor, for the ingress and egress of the fowls; *a*, a lattice window, three feet above the floor or ground, for the admission of fresh air to the sitting hens; *R*, the roosting place, or loft, shut off from the laying and sitting apartments by the ceilings, *c*, *c*; *h*, a hole, or opening in the ceiling, for the escape of the air below into the loft; *v*, the ventilator at the peak of the roof; *p*, the roosting pole, or perch; *t*, a trough, or box, for retaining the droppings, or dung.

## EXPENSE AND PROFITS IN RAISING INDIAN CORN.

The following interesting statement on the cultivation of Indian corn, by Levi T. Marshall, of Vernon, Oneida county, we find in the Transactions of the New-York State Agricultural Society, for 1848:—

The land upon which the following crops of corn grew was upon the flats of the Shenandoah Creek, six miles below its head waters, and being situated about 100 feet below the summit level of the Chenango Canal. The soil a brown mould, in good condition, with a previous cropping of meadow hay for thirty successive years. Corn planted 23d of May, upon the inverted sod, in hills three feet apart. One acre plowed in the spring, the other in the fall; the one plowed in the spring producing five bushels the most. Four and five kernels dropped in the hill, that number being designed to be left standing, and appeared above ground in about five days after planting. The eight-rowed yellow variety planted, with eight quarts to the acre; hoed twice, the cultivator also having been passed twice in a row previous to each hoeing; stalks topped the 20th September, yielding two loads to the acre. The crop was not planted with particular reference to obtaining a premium, and the subscriber not being timely informed of the rules of the society as to the time of shelling and mode of management, it was sold, to be delivered by the 1st of December, and accordingly shelled from the 25th to the 30th of November, it then being dry and suitable for grinding, and the number of bushels estimated, by weight, it being sold in that way, and yielding 123 bushels and 20 pounds upon two acres of land. Sold at 50 cents at the Vernon Centre Mills.

EXPENSE OF CULTIVATION.

| | |
|---|---|
| Two days' plowing, . . . | $3.00 |
| One day's harrowing and marking, | 1.50 |
| Four days' planting, . . . | 3.00 |
| Twelve days' hoeing, . . . | 9.00 |
| Two days' topping stalks, . . | 1.50 |
| Ten days' harvesting, . . . | 7.50 |
| Four days' shelling, . . . | 3.00 |
| Drawing to market, (two miles,) . | 3.00 |
| Seed and surveying crop, . . | 2.38 |
| Interest on land, . . . . | 7.00 |
| Total expense, . . . . | $40.88 |
| 173 10-56 bushels, at 50 cts., . | $86.68 |
| Stalks, . . . . . | 10.00 |
| | $96.68 |
| Deduct expense, . . . | 40.88 |
| Profit, . . . . . | $55.80 |

## EXTRAORDINARY YIELD OF BARLEY.

From the State Transactions, we copy the following statement of a field of barley, by Melas Adams, of Martinsburgh, Lewis county, N. Y.:—

The previous crop was peas, sowed on sward land, on which 20 loads of unfermented yard manure was spread previous to plowing for the crop. The manure did not extend over the whole field. The field has lain in meadow 11 or 12 years.

The soil has not been analyzed, but to give it a common name, I should call it a clay loam with a stiff retentive subsoil. Location in East Martinsburgh a mile west of the Black River, and on an elevation above the bed of the river of 135 feet.

Applied 10 loads only of manure on a part of the field which received none on the pea crop, and spread evenly over the ground before plowing for the barley. Sowed on the 2d of May 2¾ bushels of the two-rowed kind to the acre. Harvested the crop on the 4th of August, and put it in cocks the same day, where it remained six days, when it was drawn to the barn; threshed the whole during the present month by putting a pile on the barn floor and treading out with horses—the old Dutch

fashion—and cleaned in the ordinary way with fanning mill. The yield was 130 bushels per acre.

CR.

| | |
|---|---|
| By 130 bushels at 50 cts., . . | $65.00 |
| By straw, . . . . . | 4.00 |
| | $69.00 |

EXPENSE OF CULTIVATION.

| | |
|---|---|
| One day's plowing at $1.50, . . | $1.50 |
| One and a half days' harrowing and rolling at $1.50, . . . | 2.25 |
| Two days' harvesting, . . . . | 2.00 |
| One day's carting, . . . . . | 2.00 |
| Half day's hauling manure, . . | 0.75 |
| Sowing 25 cts., five and a half bushels seed at 62½ cts. per bushel, . | 3.69 |
| Six days' threshing and cleaning at 75 cts., . . . . . | 4.50 |
| Interest on land at $50, . . . . | 7.54 |
| Total expense, . . . . . | $24.23 |
| Profit, . . . . . | $44.77 |

## MR. ROBINSON'S TOUR.—No. 9.

*Louisiana.*—There are a good many small rice farms along this coast of the river, on which the seed is usually sown broadcast, in March or April, and flooded in June or July, three or four inches deep, if the state of the river admits; and if it does not, it grows dry, as there is not energy enough in the Creole population, who plant rice, ever to fix any kind of machinery to elevate water to flood the rice fields. Mr. Andrew Knox, a very intelligent gentleman, with whom I spent a night, is of opinion that all of the back lands might be very profitably cultivated in rice, by using windmills to drain the land, and the same cheap power to flood the fields, when needed. Some plant in drills, and cultivate with plow and hoe. This produces the best crop, but requires labor, which is very objectionable among "white folks." The rice sown broadcast has to be wed with sharp hoes or knives. The crop is cut and stacked like wheat, in September, and is threshed, or trodden out, now and then. It is sometimes winnowed with a fanning mill, but oftener with a blanket, somewhat after the manner of the old Dutch fan. The hulling machines are equally primitive. A mortar and pestle being the most common. An average crop is about 30 bushels of paddy to the acre, weighing 60 lbs. to the bushel; and is worth about 75 cents a bushel, or 2½ cents per pound, clean.

Four years ago, Mr. K. bought 1,240 arpents, for $2,100, without fence or buildings—an old-field pasture—340 arpents cleared land—700 tillable—800 now in wood. It cost him $20,000 and one year's labor with 35 hands, (except making a small crop of corn,) to get ready to make sugar. But he has so renovated the old fields, that he made last crop, from 240 arpents of cane rolled, 325 hogsheads of sugar, and the unusual quantity of 85 gallons of molasses to the hogshead, (27,625 gallons,) worth 18 cents a gallon, and sugar four cents per pound will make $15,210, while the value of the place has increased so, that, compared with late sales in the vicinity, it is worth $100,000. This is certainly much better than letting such land lie an idle waste. His annual expenses are about $6,000, as he buys nearly all his corn, as well as meat. He works 24 mules and 6 yoke of oxen, and uses good tools. Notwithstanding he has plenty of timber, he has ordered wire to fence his front, because he thinks it will be the cheapest. Cypress pickets, or rails, for post and rail fence, with which nearly all fences are built, are worth from $5 to $7 a hundred, and posts $10, and will not last over ten years. So that it is easy to see that wire is the cheapest. I am glad to perceive that Messrs. Allens are prepared to furnish it to order in any quantity; as I think that, as soon as its value and cheapness as a fence becomes known, the whole coast will be fenced with it.

To show what judiciously-applied labor is capable of producing, I will state a few facts relative to the plantation of Mr. Wm. Polk, a very enterprising and intelligent young man, from Tennessee, whose place is about 24 miles above New Orleans, on the "west coast." He bought the tract about four years ago—an old Spanish grant—of some 7,000 arpents, running back near nine miles, much of it on a ridge, upon which cattle can be enclosed by a wire fence, back of the cultivated lands. Upon this tract, he intends to put a large stock of cattle, that will live upon the cane. He found upon the place an old dwelling, the shingles of which, though still sound and nailed with wrought nails, attest its age. There were about 310 arpents of cleared land, part in rice field, and balance old-field pasture, with but one ditch upon the place, the whole not worth the annual taxes. In 1846, he broke up the land deep, with four and six mules, by incredible hard work, and planted corn, and made about half a crop; which some of his neighbors said was because he plowed his land so deep that he had spoiled it. But he said, it was because it never had been plowed so deep before, and could not be expected at first to produce so well; and, secondly, because he had not yet got it perfectly ditched. In the winter of 1846-7, he gave it another thorough plowing, planted cane, and completed the ditches, laying it into squares six rods on a side, having a fall of twelve feet in 105 arpents back from the river. The next crop made him 445 hogsheads of sugar, besides seed cane. In 1848, he had 320 arpents in cane, 285 of which he rolled, and made 525 hogsheads of sugar, and about 36,000 gallons of molasses, working 55 field hands, (90 negroes in all,) 37 mules, 10 carts, 3 wagons. 14 double plows, and no oxen. His sugar house cost $17,000, besides the labor of his own hands making brick and doing most of the work, estimated at $9,000 more. Much of the worst of the ditching was done by hired Irish laborers. He feeds his field hands 6 lbs. of pork and 12 quarts of Indian meal a week, besides molasses, sweet potatoes, and other vegetables; and, although they were from the north, he finds that they keep healthy and strong upon this high feeding, without complaining of lassitude, as is usual among those brought here while acclimating.

He confidently expects to derive a profit from grazing cattle upon his extensive back lands, and

selling them for beef at New Orleans. Some of those who thought he was "spoiling his land by plowing it so deep," now look with wonder upon his success. There are several persons above Mr. P., who turn their whole attention to raising cattle; and, in the course of my drive, I saw, at one place, a very unusual appendage to the cattle yard. It was a well-constructed rack. I also saw a good many hogs, and some of them as mean as well could be conceived of.

Upon Mr. Thomas Maye's place, I saw the effects produced by a large crevasse some 40 years ago. The whole surface, where it run, is in ridges, some of them six feet high, made by deposit of the earth carried in solution in the river water. This is so great that it has been thought practicable, by some persons, to fill up the swamp back of New Orleans, by letting the river flow through it, which is to be done by confining it within proper bounds.

Mr. M. lost his sugar house and 160 hogsheads of sugar by fire, last fall, from sparks falling upon the dry roof. To prevent similar accidents, let a small pipe be attached to the force pump and carried up and along the ridge of the roof, letting out little jets of water every few feet. This simple and cheap plan would have kept the roof wet all the time, and prevented the present great danger, as well as several others, which have occurred heretofore, and are likely to occur again. I do not think the expense would exceed $25, which might soon be saved in insurance.

Blackberries, plums, and peaches, are now in bloom; Indian corn is planting; and oats about three inches high. The latter will be good to cut green in March, or for seed in May. Corn is planted from January till May. Figs grow so abundantly upon Mr. Maye's place, that his negroes have all they can eat, which he considers very healthy.

The style of dwellings here is a story and a half —the half one at the bottom—though sometimes it is high enough for use and is paved with marble or tiles—a front and back gallery, often all around —all the doors and windows just alike; that is, two inner doors opening from the centre the upper half glass, and two outer ones of wood, hung with great wrought-iron hinges big enough for a door 16 feet wide, instead of 16 inches, fastened with large iron hooks.

In warm weather, the whole are open and a curtain fills the space. One of the handsomest and most luxurious gardens that I noticed, is that of Valcour Amie, who is also one of the largest planters, and makes refined loaf sugar. His house is more modern and splendid.

The entrance of the houses here is nearly in front. You drive in upon one side of the garden and into the back yard, among a general assortment of chickens, young negroes, turkeys, ducks, and dogs.

Governor Roman's garden is another enchanting spot. Judicious taste, skill, wealth and climate combined, makes a scene here, which, if it could be exhibited in January in New York, would command a world of admiration.

Mr. James M. Lapice is a large planter, who also refines all his juice into loaf sugar, &c. He is the only one that I know of, who regrinds his bagasse in a separate mill. He has two three-roller mills, set 12 feet apart, with a carrier between, so arranged as to reverse the position of the bagasse, in order that it may enter the mill in a different manner from that which it came through the other rollers. By this process, he gets about 75 of the 90 per cent. of juice contained in the cane, and makes bagasse so free of saccharine matter, that the acidity arising in the decomposition is not great enough to injure the land to which it is immediately applied. It is ground, or broken up much finer than the common bagasse, and is spread out about six inches thick, at once, upon cane stubble that is to be broken up. This serves to keep the land loose and mellow. This method is the same as that practised upon grass, &c., called "Guerneyism." In the spring, he sends the hoe hands to rake off the top of old cane rows, and plant a hill of peas every 12 or 15 inches. These grow and cover over the ground completely, and the next winter, together with the now-rotten bagasse, are turned under with a heavy plow and planted again in cane, and produce a crop greatly increased in value. This process also serves to keep down the coco, in consequence of being so smothered a whole year, that the cane gets up and ahead of it, and then keeps ahead. Mr. Lapice's rule, in relation to team, is different from most planters. He works 120 hands in the field and 120 mules or horses, besides 40 oxen, or one mule or horse to every hand, and never works them but half a day at once. The set that go out in the morning are brought up at noon and turned into a pasture, of which he has 600 arpents, and a new set are all ready in the stable, having been previously fed, to go to work in the afternoon. At night, those at pasture are taken into stable and fed ready for morning and the others turned out. Thus they are never fed hot, but eat less corn, and are less sick, wear longer, and can be driven harder, while at work. He makes and uses 18,000 bushels of corn a year; has in use 100 plows; 20 large iron-axle carts, with brass boxes. Average crop of sugar about one million pounds.

*January 24th*, 1849.

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THE MANNER THE WOOD PIGEON OBTAINS ITS FOOD.—The wood pigeon has a weak bill; but Nature has provided her with very strong wings; when the flock, therefore, settles upon the lying portion of the wheat field, instead of breaking off the heads and carrying them away, (as is done by the rook,) they lay themselves down with their breasts upon the grain, and using their wings as flails, they beat out the "prickles" from the heads, and then proceed to eat them.—*Burn Murdock.*

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DIRECTIONS FOR RIDING.—Keep your head up, chin down, chest forward, shoulders back, elbows in, hands down, back in, belly out, feet forward, thighs fixed, knees in, legs close, heels down, and toes in. Trot two hours a-day without stirrups, loins loose, seat firm, hand tight, horse and rider well balanced, and then time and perseverance may make you a horseman.—*Bell's Life.*

## AGRICULTURAL STATISTICS.

A DESIRE faithfully to discharge the duties devolved on this office in relation to agriculture, prompts me to seek impartially from persons of known experience and research, the best information on the several topics embraced in this circular, and upon such others as may, in the judgment of practical men, contribute to the benefit of that vitally-important branch of our national industry.

Comprehending, as this circular necessarily does, a variety of subjects, with all of which no one person can be supposed to be practically familiar, it is presumed that each one to whom it may be addressed will confine his observations to such matters as have come under his own experience. Such information it is the purpose of Congress in this mode to collect and distribute for the common benefit of the agricultural community, and it cannot but be, in the aggregate, of enduring value.

Excluding mere estimates and local details of weather and crops, which may be found in the able agricultural journals of the country, the design of the annual report, to which you are invited to contribute, is to bring to light and register in a permanent form, important facts and discoveries, the results of actual experiment, which might not otherwise become so soon nor so widely known.

It is likewise intended to constitute a repository of agricultural statistics, founded upon official and other reliable data, which may serve as authentic bases for the use of the politico-economical inquirer and legislator.

Whatever may have been tested and found new and useful in practice, together with important agricultural statistics, will be acceptable; especially suggestions as to the introduction of such new objects in the way of machinery, animals, processes, or plants, as may tend to the profitable diversifying of the application of labor and capital to the all-important science of cultivation.

With this brief explanation of the objects contemplated by Congress, and leaving to your discrimination to judge how you may best and most conveniently assist in their accomplishment, I beg leave to tender in advance, for any contributions you may be pleased to make, my respectful acknowledgments.

THOMAS EWBANK,
*United-States Patent Office,* } Commissioner.
*Washington, July,* 1849. }

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The Commissioner of Patents, in execution of acts of Congress, desires to procure information from planters, farmers, and others, on the following, and any other points that may occur to you connected with agriculture:—

*Wheat.*—Your experience as to varieties—difference in weight, and of time in ripening—their enemies and diseases—soil and manures best adapted to.

*Oats.*—What varieties have you tried, and with what results, particularly as to time of ripening—what their estimated value as compared with corn as food—is the cultivation of the oat becoming more or less popular, and for what reason?

*Rye.*—Have you knowledge of any new and valuable variety—to what uses is it applied—have crops diminished of late years, without any apparently corresponding diminution in the fertility of the soil, and to what influence is it supposed to be attributable?

*Barley.*—Have any new varieties been tried, and with what results—to what uses is this grain applied in your state—if not cultivated, is it forbidden by your soil and climate?

*Indian Corn.*—What varieties most esteemed, and for what reasons—what the difference in time of ripening—is it liable to change of character and qualities according to soil and climate, and other influences, and your observation on that point—give the estimated value of the shuck as compared with the blade, and of both as compared with good hay, weight for weight—what is the value of green corn for soiling cattle, and especially for producing milk—your experience as to feeding grain, whole or ground, cooked or raw.

*Rice.*—Variety cultivated—describe any new and valuable process for its cultivation or preparation for market.

NOTE.—As to all these grains, please to state the cost of production and usual weight, and the probable *average* per *acre*, and actual *aggregate product*, if known, of each in your state—whether the average product per acre has increased or diminished—whether the weight per bushel of the various grains is fixed by law in your state, and what weight is prescribed for each.

*Hay.*—State the comparative value as food for stock, of clover, Timothy, and mixed hay—the grass seeds preferred in laying down meadows—the average yield per acre; describe any new process in curing. Have meadows been irrigated in your state, and with what effect?

*Peas.*—For what purpose cultivated in your state—for food, or for improving the soil—estimated value as food for stock compared with Indian corn—the most esteemed variety for field culture—average product per acre—value of haulm, or vines, compared with other fodder—average price per bushel in the last year.

*Root Crops.*—Irish and sweet potato, turnips, carrots, beets, mangold wurtzel, artichoke, and other varieties—comparative value—cost of production—weight per bushel—average per acre, and aggregate product for your state.

*Cotton.*—Average yield per acre and per hand in your state—aggregate yield of the whole state for 1849—describe new varieties and process of cultivation—manures best adapted to—cost, per pound or bale, of production—freight, charges, commissions, &c., paid by the planter.

*Sugar.*—Whether of cane or maple—the product per acre—describe any new process of cultivation or manufacture—variety of cane cultivated—its enemies and diseases—cost of making sugar—freight, charges, commissions, &c., paid by the planter.

*Hemp.*—On this head give any information that you may deem valuable and new, as to varieties, processes of cultivation, and preparation for market—soil and manures best adapted to—cost of production.

*Butter.*—Quantity made in your state—average annual produce per cow—are cellars or spring houses preferred?

*Cheese.*—Same questions.

*Horses and Mules.*—Number raised in your state

—average value of each—comparative value for agricultural purposes—where is your market for them?

*Number of Horned Cattle* in your state—average value of, at three years old—where driven to market—cost of keep per head per year—which of the improved races is preferred?

*Sheep Husbandry.*—What the prevailing races—what the condition of this branch of industry—amount of wool clipped in the year, and average weight of fleece of different races—cost of keeping sheep through the year per head—where your markets—what your system of selling—have you wool depôts, and are they found advantageous for wool grower and manufacturer—what number killed by dogs in your state?

*Hogs.*—Average weight at a given age—average weight consumed per head—proportion of live to net weight, and cost of production per pound.

*Rain.*—Time and degree of highest and lowest range of thermometer, and the mean temperature of the year; also inches of rain water in each month, and aggregate for the year.

*Labor.*—Cost of, with and without boarding, and cost of boarding.

*Tar and Turpentine.*—Quantity and value of, produced per hand.

*Lime, Plaster, and Other Fertilizers.*—If used as an improver in your state, how much is thought to be best per acre, and how often applied?

*Orchards, Fruits, Transplanting of Trees, &c.*—Information on these and kindred matters, will be of universal interest.

*Cultivation of the Vine, Grapes, and American Wines.*—Communications on this subject are particularly solicited.

Such of our readers as have it in their power will please to answer as much of this circular as is convenient, after procuring the requisite information, and before the 1st of December; and, in the mean time, please to name any one to whom the circular may be sent in the hope of fuller information.

## GREEN MANURES.

In practical husbandry, cases often occur where poor, light, and sandy soils, as well as meagre clays, may be enriched by cultivating cheap, quick-growing vegetables, and plowing them under, instead of forming them into heaps near by, to be composted, with earth, muck, or lime, and then returned to the field at a considerable expense for working, carriage, &c. This is now commonly called "green manuring;" the principle being to enrich the soil, by setting a quick-growing plant to draw organic matters from the air, and inorganic from the subsoil, below the reach of the roots of ordinary plants; and then plowing it into the soil.

Peaty soils and lands newly cleared generally do not require this kind of manuring, as they are already full of vegetable matter, and want only lime to neutralise the acids contained in them, and nitrate of soda or sulphate of ammonia to supply them with nitrogen. Poor, clayey soils, however, are much improved by having their subsoil burnt, or rather charred, with peat, spent tan bark, sawdust, or any other cheap kind of fuel. And as vegetable matters work sour, the land, before plowing them under, should receive cheap, inorganic dressings, such as salt, lime, plaster of Paris, marl, &c., which, when added, help the growth of the plants, and promote their drawing other matters from the air as well as the soil.

The vegetables grown for the purpose of green manures should have the following properties:—They should flourish on poor soils; require little labor in cultivation; have cheap seed; be of quick and sure growth; stand the climate and vermin; run their roots deep; bring up from the subsoil what the succeeding crops require; smother weeds; and produce a great quantity of stalks, or foliage, which will easily decay in the soil, without leaving any residue hurtful or pernicious to future growth.

Among the plants best known for this purpose, and which appear to be most suitable for this country, we would note the following:—

1. *Red Clover.*—This plant requires a rich, or moderately rich soil; little labor in cultivation; seed cheap; stands the climate and vermin well; is rapid in its growth; abundant in its yield, say from two to eight tons per acre, when green; roots penetrate from eighteen inches to two feet and a half into the soil, and are equal in bulk to about one half of the stalks and leaves. Every 1,000 lbs., when dry, contain 4 lbs. of potash, $1\frac{3}{10}$ lbs. of phosphoric acid, and $3\frac{3}{4}$ lbs. of nitrogen. If plowed under, when in flower, as green manure, it is rapid in its decay.

2. *Rye.*—This will grow on poor, dry, light, sandy or gravelly soils; is cultivated with little labor; seed cheap; stands the climate and vermin well; comparatively slow in its growth; abundant in straw; but its roots do not penetrate deep into the ground. Every 1,000 lbs. of the dry plant contain 4 lbs. of nitrogen, but no appreciable quantity of potash nor phosphoric acid. It may be plowed under late in the spring for fertilizing the soil.

3. *Buckwheat.*—This plant will grow on a dry, sandy, gravelly, or peaty soil; requires little labor in cultivation; seed cheap; stands the climate and vermin well; is rapid in its growth, particularly so in connexion with saltpetre and plaster of Paris; produces from two to four tons of roots and green herbage to the acre; but the roots do not penetrate deep into the soil. Every 1,000 lbs. of dry roots and tops, cut in full flower, contain $1\frac{1}{2}$ lbs. of potash, $\frac{7}{10}$ of a pound of phosphoric acid, and 2 lbs. of nitrogen. Plowed under, as a green manure, it is somewhat rapid in its decay.

4. *Spurry.*—This plant will grow on a poor, dry soil; requires but little labor in cultivation, and a small outlay for seed; grows in about two months; will yield about two tons of herbage per acre; and its roots run about fifteen inches deep. Every 1,000 lbs. of the roots and tops contain 9 lbs. of potash, $1\frac{1}{2}$ lbs. of phosphoric acid, and 4 lbs. of nitrogen. When plowed under, as a green manure, it decays rapidly in the soil.

5. *White Lupin.*—This plant has been extensively used in Italy, for plowing under, from the time of the Romans, and has been adopted with great success in Germany, for the same purpose, not only on poor lands, but on soils in high cultivation. It is adapted to all soils except those which are limy; is cultivated with little labor;

seed somewhat dear; stands the climate and vermin well; rather rapid in its growth; will sometimes produce ten or twelve tons of herbage per acre; and its roots penetrate to the depth of two feet into the soil. Every 1,000 lbs. of the dry plant contain 1 lb. of potash, $1\frac{4}{5}$ lbs. of phosphoric acid, and $4\frac{3}{16}$ lbs. of nitrogen. Its stalks are somewhat slow to decay, when plowed under as a green manure.

Another method of obtaining vegetable matter for composting in the manure heap, or for plowing under the soil, consists in cultivating, near at hand, quick, rank-growing plants, on some richly-manured spot, in order to avoid the expense of collecting and carting such matter from a distance. Among the perennials of this class, may be mentioned the Jerusalem artichoke, tansey, prickly comfrey, and Bokhara clover, which throw up a heavy mass of stalks and foliage, that may be cut several times in a season, and are rich in nitrogen and fertilizing salts.

*Tansey*, it is stated, is satisfied with poor, hungry soils; stands all weathers; suffers little from vermin; produces a great mass of foliage, say 24 tons per acre; extends its roots from two to four feet into the subsoil; will last ten years without further expense; will sow itself again; and may be cut twice a year. One acre, when cut in the blossom, will "green manure" two acres for two years, or will keep four acres of hungry soil in a fertile condition from year to year.

The *prickly comfrey*, it is stated, has produced 90 tons per annum, of green foliage, to the acre!

Among annuals, that possess the above-named properties, the pindar, (peanut,) the cow pea, and white mustard, have particularly been recommended to be cultivated as a cheap manure. In fact, any other quick-growing plant, or shrub, which flourish naturally upon waste places, may be increased by cultivation, and contribute to fertilize the soil. They should be cut when in blossom, as they then generally yield the heaviest and richest produce; but before seeding, in order that they may not be carried into the tillage lands as weeds. If the land is under crop at the time, they can be heaped in compost, as a substitute for the dung heap; or, if the land be bare, they can be plowed under at once.

## EXHIBITION OF STRAWBERRIES.

The following is the report of the committee, as published at Rochester N. Y.:—

Matthew G. Warner, Esq., presented thirteen varieties of strawberries, viz: Hovey's Seedling, Columbus, Ross' Phœnix, Black Prince, Boston Pine, Burr's Old Seedling, Hudson, Rival Hudson, Corse's Seedling, Crimson Cone, Burr's New Pine, Early Scarlet, Austrian Scarlet; the Hovey's Seedling being entitled to the society's highest premium for the best quart.

Mr. Lewis Burtis presented Hovey's Seedling, fine specimens, entitled to the society's premium for second best quart. Matthew G. Warner, Esq., entitled to society's premium for the largest number of varieties, and best grown pint of each.

Messrs. Ellwanger & Barry presented Myatt's Eliza, Boston Pine, Early Scarlet, Black Prince, Burr's Seedling, and eight new seedlings, worthy the thanks of the society, being a larger number of new seedlings than has been offered on any previous occasion. The committee think a premium ought hereafter to be offered for seedling strawberries of superior merit.

Mr. Charles Paulk, of Honeoye Falls, presented seven varieties of strawberries—Bishop's Orange, Black Prince, Prolific Hautbois, Stoddard's Alpine, Hudson's Bay, Boston Pine, and a new seedling.

Messrs. Bissell, Hooker, and Sloane, presented Burr's New Pine, Columbus, Burr's Old Pine, Black Prince, Cushing, Early Scarlet, Hudson, Rival Hudson, Boston Pine, and the celebrated Hovey's Seedling.—*Rochester Paper.*

## SMALL vs. LARGE CALVES—REPLY TO REVIEWER.

It is Reviewer that has to explain his language. He first made use of the term, "a runt of a calf," if he calls a *small calf* a runt. I call that calf the "good one," and not the "large calf." It is an invariable rule with me to kill a calf, if large, when first dropped from the cow. I have never yet seen such a calf grown up to a good animal, and I will venture to say that Reviewer never saw a *well-bred herd* produce *large* calves. It would be positive proof to me of their mongrel pedigrees. I could show him instances from my own practice, sufficiently convincing to any man.

This season, I saved a calf, when first dropped. I knew its pedigree, and felt perfectly safe in raising her. I will risk my judgment by saying she will make the best of ten half bloods raised with her, all sharing equal feed. I will refer Reviewer to any "scientific breeder," for proof of this statement. If the butcher's knife caught all those large calves, there would not be so many mongrel cattle in the country; for it is those that produce them. I mean to be thoroughly understood, that I would not raise a *large calf*. I do not mean a calf that has been forced by its mother's side, and with meal; but the appearance of the calf the day it is born.

I consider the Herefords the best breed of cattle in the world, for all purposes. The Devons second, which I think is sufficient proof of my not being a shorthorn man. Wm. H. Sotham.

*Black Rock, N. Y., August 5th*, 1849.

Our readers must bear in mind, that friend Sotham is always "death" on the shorthorns. They will therefore excuse his placing them as *third-rate* among the improved breeds. Others hold different opinions; and, although he seems disposed to war against them, even to "the knife," still, we think, good shorthorns are destined to live yet a little while longer, and flourish. At any rate, their breeders, and no small portion of the public, seem to be so *obstinately* set in the belief that they possess *first-rate*, instead of *third-rate* merits, that we doubt whether they will allow them to be utterly exterminated very suddenly, by the thrusts of our belligerent friend. But to the point. The three breeds of improved cattle, Hereford, Devon, and shorthorns, have each their different merits, particularly suited to particular localities and requirements. It is for the farmer to study these peculiarities, and make up his mind which is most suitable for him, and then choose.

# Ladies' Department.

## APPLE-PARING BEE.

A MUCH longer time than I intended has passed, since I promised to give your readers an account of our apple-paring frolics; but some untoward circumstance has occurred to prevent it, or to turn my attention to another subject when I sat down to write.

As I wish to be useful, as well as amusing, I will begin at the beginning, or as near as I can without encroaching upon the nurseryman's province—the management of the trees. On that subject, prudence bids me be silent—so we will suppose the orchards are just what they should be. I will only *hint* that, when it can be done without injury to a ground crop, the hogs should be allowed to run in the orchard for a month or six weeks after the fruit has set, to eat all that has been stung by the apple millers, as soon as it falls, to prevent the larvæ from getting into the ground; whence they will surely issue next spring to destroy another crop. It is well, too, to have the trees frequently shaken gently, in the course of the summer. Few apples fall but the wormy ones, and those prematurely ripe, which only burden the trees, and prevent the full development of the best fruit.

After the hogs are turned off, as the full-grown apples begin to fall, it is pleasant work for the children to gather them. The best may be taken to market, and sold as early apples. Others may be cooked for daily use; and how delicious those same "early-apple" pies and sauces are! How it makes one's mouth water to think of them! The surplus are pared and cut for drying; either spread on boards on sheds, or trestles in the sun; good care being taken to cover them at night to keep off the dew; or they are strung on packthread, and hung in festoons from one upper window to another, on the sunny sides of the house—puzzling travellers unacquainted with the custom, who cannot imagine what those numerous, queer-looking "ornaments" are, or what can possibly be their use. I do not recommend this last way of drying any fruit, as there is apt to be left a hard lump where the string passes through. When they are prepared in this way, a basketful or two at a time, the trouble is unheeded, as it takes but a few spare minutes each day, and something is daily gained towards the stock of winter provisions. In damp weather, and later in the season, when they are to be dried in the oven, the apples should not be cut very thin, as they become tasteless and tough. If the small ones are divided into four, and the larger into six pieces only, the fruit, when cooked, will be more tender, and have a richer flavor.

When apples are in unusual abundance, or are cultivated on a large scale for exportation, or sale, it is very common for the men to have a "bee" in the morning, to gather, and cart them home, where they assort and spread them out to "sweat," before they are packed in barrels, buried in garden heaps, or otherwise stored away. Everybody joins in the "gathering in," and a rare frolic it is to the happy children to be allowed to help or hinder, as the case may be—girls and boys, down to the "todlin wee things," that "may be ane, or may be ither;" for all the difference in their appearance is made by the frocks and aprons, sunburnt faces, and short, curly hair.

But I have delayed too long, and must hasten to the frolic—the "great apple-paring bee," which always takes place on the evening preceding the day appointed for boiling apple butter; a work of no small importance to our northern farmers. From these select and well-arranged parties, no affectation of refinement need keep away even the boarding-school young ladies, nor the college students, who might be horrified at the suspicion of their joining in a "corn-husking frolic," or a "log-rolling bee." Here neighbors, whose parents and grandparents have been friends from generation to generation, meet on equal ground. While all are engaged in contributing to the happiness of others, the cheerful conversation, the merry laugh, and the comic song are unrepressed by chilling rebuke, or morose looks. Not the slightest approach to boisterous mirth or rudeness is tolerated. It is no unusual thing, when a party is smaller than was expected, or if some particularly entertaining guest has failed to come, to introduce a book, and beguile an hour or two by reading aloud.

Among our young people, these meetings are still looked forward to with the most pleasant anticipations; and I hope the time is far distant when the beautiful simplicity of manners in our little community will be changed, and we become too "refined" to enjoy them. I shall not live to see it; for as yet there is no symptoms of any such unhealthy change. I love not to see old heads on young shoulders. I do love dearly to see young people enjoy themselves, as the young only can.

In the house to which they are bound, everything has been prepared for their reception the day before; and as soon as the early supper has been hurried away, the carpet in the common room is taken up; or where dancing is not allowed, it is carefully covered; but most generally the assembly is held in the kitchen, which, among industrious farmers, is always the largest room. The tubs and baskets of apples are brought in and arranged around the room, in front of the chairs. The large logs are piled on the fire in the great chimney, in the ample corners of which the old people have taken their seats, expecting and receiving all proper deference and respect from the younger members of the party.

The visitors seat themselves, as they arrive, and, without ceremony, or much choice of places, they begin to work, each of the women with a coarse towel spread under the dish of apples, to protect the snowy-white or neat check aprons from spot or stain. The knives are sharp as razors, the work goes on rapidly, and, as the apples are pared, they are put into baskets or pans. When enough are done, two or three of the more elderly boys begin to cut and core them; and, with a fair start, one expert hand can keep half a dozen busy paring for him, unless they employ the "patent apple parer," which reverses the matter in fine style, and takes the skins off as fast as half a dozen pair of hands can cut and core. I do not think I quite like this labor-saving machine at an apple paring; it does the work too soon; but it is a useful little thing that should find a place in every kitchen. E. S.

*Eutawah, August*, 1849.

### EPIGRAM.

About twenty years ago, it was common to trim straw bonnets with artificial wheat and barley, in ears, on which the following lines were written :—

Who now of threatening famine dare complain,
When every female forehead teems with grain?
See how the wheat sheaves nod amid the plumes;
Our barns are now transferred to drawing rooms;
And husbands, who now indulge in active lives,
To fill their granaries, may thresh their wives.

### CONSERVE OF PEACHES.

Pare and cut, or split your peaches, and to each pound of fruit, put three quarters of a pound of best loaf sugar; boil them until they are clear; take them out, drain slightly, and spread them on dishes to dry; boil, also, the syrup until it thickens, and each day add a portion of the fruit, which must be exposed to the sun, until it has all been absorbed, and the fruit is dry. Then sprinkle sugar at the bottom of your jars, and put alternate layers of peaches and sugar until they are full; stop close, and they will keep good a year.

*Peach Leather* is made by boiling pared peaches till they form a thick pulp. Spread on dishes; dry in the sun till it becomes tough; put it into a dry place, and it will keep well. When wanted for use, soak a portion for a night, in just water enough to swell and soften it; sweeten with good brown sugar, and make pies of it. Quinces, preserved in the same way, are also extremely nice for winter desserts.

## Boys' Department.

### AGRICULTURAL CHEMISTRY.—No. 15.

I have previously informed you that different species of plants require different kinds of food, and in my last letter, I told you that a soil usually becomes so impoverished, after a few years' tillage, as to be unable to produce a medium crop without the aid of manure, or the advantage of fallow. Now, if these views are correct, it follows that, if the same kind of grain be put on the same field for several years in succession, the soil will be likely to become almost totally exhausted of some of the constituents which this kind of plant requires; and this exhaustion will manifest itself in its sickly appearance and diminutive yield.

Here theory tells us it would be to our advantage to have our various kinds of produce succeed one another, so that the same ingredients need not be drawn from the soil every year; and the experience of ages has led to the same conclusion. Indeed, there is no fact better established in farming, than that the same kind of grain will not thrive for a succession of years on the same ground, except in some rare instances, where the soil is excessively rich. Land may be forced, however, by copious manuring, yearly, to sustain a luxuriant growth of the same crop every year, for an indefinite period; but this system, in most cases, would be an unprofitable one. We see, in the growth of forests, an illustration of the principle of rotation, on an extensive scale. When a forest of any particular kind of trees is cleared away, if left undisturbed, it will be succeeded by a growth of another species; and we are informed by those who have given attention to the subject, that Nature has established a regular system of rotation for forests, and determined in what order the various species shall succeed each other. On the farm which I occupy is a small wood lot, from which the largest trees, consisting mostly of oak, have been removed, and now a thick growth of pine is springing up, which bids fair to monopolize the whole ground in a few years. Another fact, well known among nurserymen, is, that a young tree will not flourish, if transplanted to a spot previously occupied by an old orchard of the same kind.

Such illustrations of the principles of rotation have been long observed, and if science could not explain them satisfactorily, there would be some apology for adopting an explanation founded on conjecture. A theory which has had many advocates, both learned and unlearned, is, that more or less excrementitious matter is discharged from the roots of plants that is afterwards poisonous to the species that produced it, though not injurious to others. I have previously alluded to this theory, and told you it was not supported by sound reasoning. It was formed before science had advanced to its present state, and it seems almost unaccountable that so many should still adhere to it, when the phenomenon it was formed to account for can be explained in a far more reasonable and satisfactory manner. When one side of a question is supported by arguments based on conjecture, and the other by facts, such as science has unfolded, we ought not to hesitate long which side to choose.

Let us examine the theory a little more closely. It supposes that plants absorb, by their roots, certain ingredients which are not adapted to the purposes of nutrition, and which, after passing through their circulation, are again returned to the earth. Now, admitting this to be so, though we have no positive proof that it is so to any extent, we are still at a loss to understand why this excretory matter should be more poisonous after being returned to the soil, than it was before entering the circulation. Nothing short of a magical change, wrought upon it, during its passage through the vessels of the plant, could render it noxious to the species that produced it, but harmless and inoffensive when absorbed by the roots of any other species. The theory will not bear inspection, and, in fact, can only be regarded as mere hypothesis. But when we consider, 1st, that the same kind of plant always requires the same kind of food; 2d, that no two species extract the same ingredients from the soil in the same proportions; 3d, that if a soil be exhausted of any one ingredient essential to a plant, it is incapable of again sustaining and perfecting that plant until this ingredient is restored; and, 4th, that a few months are insufficient for its restoration by natural causes, we find an easy and ready method of explaining the advantages of rotation, without adopting the theory that supposes every plant to elaborate in its own system a substance which is poisonous to its own kind.

The correctness of these views will be still more apparent when we examine the chemical constitution of such plants as are most commonly cultivated. We find that in some of them, lime appears to be the most important inorganic ingredient; in others silica, and in others potash. As these are the constituents which plants draw most liberally from the soil, and as they are required in widely-different proportions by different species, it is of practical advantage to

know what percentage of some of our common vegetables is formed by each of them. I will therefore present you with Liebig's classification of cultivated plants.

| | | Salts of Potash and Soda. | Salts of Magnesia and Lime. | Silica. |
|---|---|---|---|---|
| Silica Plants. | Oat straw with seeds, | 34.00 | 4.00 | 62.00 |
| | Wheat straw, | 22.50 | 7.20 | 61.50 |
| | Rye straw, | 18.65 | 16.52 | 63.89 |
| | Good hay, | 6.00 | 34.00 | 60.00 |
| Lime Plants. | Pea straw, | 27.82 | 63.74 | 7.81 |
| | Potato stalks, | 4.20 | 59.40 | 63.40 |
| | Meadow clover, | 39.20 | 56.00 | 4.90 |
| | Buckwheat straw and seed. | 29.00 | 45.00 | 26.00 |
| Potash Plants. | Maize (Indian corn) stalks, | 72.45 | 6.50 | 18.00 |
| | Turnips, | 81.60 | 18.40 | |
| | Beet root, | 88.00 | 12.10 | |
| | Potatoes, (tubers,) | 85.81 | 14.19 | |

By comparing any two of the above, taken from different classes, we see how different the proportions of their several ingredients; hence we infer that in most cases, our best way is to manage our rotation in such a manner as not to have plants belonging to the same class succeed each other. Still, such plants, under certain circumstances, may succeed each other without disadvantage. If, for instance, a soil abounds in lime, then different species of *lime plants* may follow each other; or if it abounds in silica or potash, then those plants requiring a plentiful supply of either of these, as the case may be, may be raised for several years consecutively.

In order to show still more clearly the advantages of a judicious system of rotation, and the manner in which a soil becomes impoverished, we will briefly examine two plants taken from different classes in the foregoing list. Take, for instance, buckwheat and oats, the entire plant of each. The former, we see, contains 45 parts in 100 of the salts of lime and magnesia, and but 26 of silica; while the latter contains but 4 parts of the salts of lime and magnesia, and 62 parts of silica. Now, when a field, the soil of which contains the usual average of these ingredients, is cropped with buckwheat for several years in succession, the demand for lime and magnesia will exceed the supply, so that this plant can no longer thrive. But oats require much less of these ingredients; therefore, when there is not enough of them to supply the wants of a crop of buckwheat, there may still be sufficient for a crop of oats; and as buckwheat draws from the soil but a small amount of the salts of silica, and oats require a large supply of them, we may reasonably conclude that oats would, in most cases, succeed on land which had been partially exhausted by buckwheat. I would here observe, that, when I speak of the soil being *exhausted* of any ingredient, I do not mean to say that no more of that ingredient is contained in it, but that it is exhausted of all that is sufficiently decomposed, or in a proper condition to contribute to the growth of plants.

As regards the precise order in which crops should succeed each other, it is impossible to lay down any particular system that can be of universal, or even of general application, although it has frequently been attempted; yet there are so many circumstances by which it should be governed, that any plan that can be proposed is liable to lead some into error. Besides, those who have rules or directions to guide them in an undertaking, which requires an exercise of judgment, are liable to place too much dependence on such rules, without going to the trouble to examine the principles, or bases, on which they are constructed. The better way appears to be to point out general principles, and thus, by enlightening the understanding, render every man competent to lay out his own plan, and such a one as is best adapted to his peculiar circumstances.

I will only add, in conclusion, that the system of rotation which appears to succeed best in this section, where the soil is a gravelly loam, is the following:—1st, corn or potatoes, on clover sod, with or without manure, as may be deemed most expedient; 2d, oats; 3d, rye; 4th, rye; 5th, clover. The latter is sowed on the rye early in the spring, and left two or three years in pasture, or, is sometimes mowed. It may be said, in objection to this system, that two *silica plants*, (oats and rye,) are here made to succeed each other; and again, that it is bad policy to put the same kind of grain on a field two years successively, as is here done with rye. I admit the force of these objections, but reply that the system is a judicious one *in this region*, where the soil contains an abundant supply of silica. When we know our soil to abound in any one ingredient, we will almost invariably find it to our advantage to confine ourselves, as far as practicable, to the cultivation of such crops as require the largest supply of that ingredient. On most soils, rye is found to succeed better when raised several years in succession on the same ground, than any other crop. Without manure, the produce of the second year is almost certain to be less than that of the first, and that of the third less than that of the second.

J. McKINSTRY.

*Greenport, N. Y., July 1st, 1849.*

## INTERESTING EXPERIMENT WITH WHEAT.

I LATELY found among my papers, the following account of an agricultural experiment:—

In August, 1795, Mr. Alsagar in Herefordshire, (England,) planted a single grain of wheat, and as soon as it had fairly rooted, he took it up, divided it into several parts, and transplanted each. In August, 1796, it was reaped, when it was found to have produced 137 ears; the average containing 80 grains to the ear. The total produce from this single grain was 10,960 grains, besides the straw, most of which was seven feet high. This shows what a prodigious advantage there is in even the common mode of setting, or what is termed dibbling, in comparison with the general practice of sowing broadcast.

I believe there is no other method ever practised in the United States than the one last named; but the question naturally arises, whether such a method as the one referred to in Mr. Alsagar's experiment, could be made available on a large scale in any country; or, upon any scale in this, where land is plenty, and labor dear; except, perhaps, as an experiment for farmers' boys. Would wheat, if planted in drills, or in hills, and cultivated like Indian corn, produce a proportionate increase of grain? Corn, when sown broadcast, certainly does not produce a crop of grain worth the cost of gathering.

E. S.

## FOREIGN AGRICULTURAL NEWS.

By the steamer Hibernia, we are in receipt of our foreign journals to August 3d.

Markets.—*Ashes* in good demand. *Cotton*, no change since our last. *Grain* and *Flour*, a slight decline.

*Provisions* in greater request, with a tendency to advance. *Cheese* of a good quality much wanted.

*Money* abundant, and American stocks in moderate request.

*Annual Show of the Agricultural Society of England.*—This took place in July, at the old town of Norwich. It shows a steady, increasing interest in the improvement of agriculture in the mother country. The number of animals exhibited was 624, and of implements 1,880. Several of the latter were of a new kind. Among other things, we find plenty of portable steam engines, for threshing, and performing other farm work. The number of visitors present was very large. Lectures were delivered by able professors on different branches of agriculture. Dinners, toasts, and speeches followed, rendering the meeting an agreeable jubilee to the English farmer.

*Letting of Southdown Bucks.*—Mr. Webb, of Babraham, England, has just let 67 Southdown bucks for the season, for £1,474 (about $7,000!) The highest price was paid by Earl Ducie, which was 86 guineas ($430). Think of that, ye improvers of stock in America. But we may hardly live to see breeders of fine animals so well remunerated in this country.

*State of Crops in Ireland.*—The weather has been beautifully fine, and the reports from several districts respecting the crops are most satisfactory. From some of the midland counties, however, there are accounts of the appearance of blight, or rust, in wheat, but nothing that will affect that crop generally. Rumors are afloat, also, concerning the potato disease, but they were partial; though the disease will appear, there can be little doubt; still, the general belief is that it will be in a very mitigated form.

*Disease among Sheep.*—"We regret to learn," says the Norfolk Chronicle, "that a disease in sheep is again prevalent on several farms in the southeastern district of the county; and it is believed to have been caused by a want of due caution in burying the carcasses of those animals which died last year by infection."

*Shetland Ponies.*—It appears that the facilities now offered for the conveyance of stock from the Shetlands southward, has had an effect on the sale of the celebrated ponies bred in these islands. Those which would have sold for 20*s.* before the introduction of steamers, are now generally sold at about £5; and £7, £8, and sometimes as high as £10, are given for superior animals.—*Inverness Courier.*

*New Water Lily.*—"The most extraordinary plant I have seen," writes Mr. W. Bidwell, from Wide Bay, New Holland, "is a water lily, (Nymphæa,) growing in a lagoon called Boppoo. This plant has leaves 18 inches or more in diameter, grows in 15 feet of water, and the flowers are 11 inches in diameter in their natural expansion. I doubt if Victoria regina is a finer plant."

*Cutting off the Stems of Potatoes.*—Mr. C. Wood, of Wadsworth Common, England, says, in a communication in the Agricultural Gazette, "I have followed the plan ever since 1845, with success. I had the tops cut off, last year, quite in a green state, long before the tubers could possibly be either ripe or have finished their growth; and, when taken up, they were fine in size and of excellent quality. I have a few of them left yet, (July 10th,) in a perfectly sound state. The only difference in the plan pursued by Mr. Lomba and mine, consists in putting a layer of earth over the surface, a practice in which I can see no value. I usually remove the haulm on the first appearance of the botrytes, (disease,) on the undersides of the leaves. I have already taken it off my early sorts, and I am satisfied, from experience, that, if this is strictly attended to, no one need fear the disease, either in wet or dry, rich or poor soils."

*Etherizing Bees Preparatory to Taking Honey.*—Put about half an ounce of ether in a small flask of two ounces capacity, and connect it with the hive by a piece of glass tube 15 or 18 inches long, bent in the middle at a right angle; place the flask in a basin of hot water, and the ether will then pass through the tube into the hive in a state of vapor. The glass tube should be fixed air-tight in the flask with a cork, in the usual way, and the entrance hole of the hive should also be closed with glaziers' putty, dough, or any similar substance, after the other end of the tube has been inserted into it. If a flask be not at hand, a thin phial may be used instead of it. The operation must be performed in the evening.—*Ag. Gazette.*

*An Ancient Goose.*—On Sunday last, Mr. W. Turnill, of Braceborough, experienced a loss of a singular nature—no less than the death of a favorite goose, which had been on the premises at Braceborough for sixty years, and prior to that had been in the possession of Mr. John Smith, of Deeping, St. James, for forty years. The bird was consequently 100 years old at its demise. Mr. Turnill intends having the skin stuffed, and preserved as a relic of antiquity.—*Stamford Mercury.*

*Unappropriated Land in New Scotland.*—That portion of British America, lying south of the river St. Lawrence, between latitude 43° and 49° north, and the longitudes 58° and 68° west, known at present under the name of "New Scotland," is estimated to contain the following amount of vacant land at the disposal of the crown:—In Nova Scotia, (proper,) 5,787,772 acres; in New Brunswick, 12,300,851; in Prince-Edward Island, and Cape Breton, 1,000,000; in Gaspe and Anticosti, 5,000,000—in all, 24,088,623 acres.

*Method of Expelling the Weevil.*—The chief director of the hospital of the city of Sens has devised an easy method of expelling the *weevil*, the ravages of which pest he estimates at twenty millions of dollars annually in the barns of Europe.

*Canada Woolens.*—The Ontario Woolen Mills, Coburg, Canada West, wove and finished nearly 60,000 yards of cloths during the last six months. The year's work will be 140,000 yards. Last year, Mr. Mackenzie, the proprietor, finished, of cloths, Tweeds, satinets, and flannels, 100,538 yards.

*Meeting of the French National and Central Society of Agriculture.*—At a late session of the French National and Central Society of Agriculture, an association which has proved widely useful, the audience was very numerous and distinguished, and included many ladies. The Minister of Agriculture and Commerce, M. Lanjuinais, presided. He delivered a pertinent address, in which he paid a warm tribute to the provincial societies for the services rendered by them to the national agriculture. Payen, the eminent chemist, perpetual secretary, read a highly interesting report of the Transactions of the Central Society, and its correspondents, for the last two years. The distribution of medals followed. One was assigned to a young man in humble life, who conceived and executed the idea of expediting the development or formation of the cork oak, (chêne-liege,) by a skillful graft on the green oak, of which the growth is quicker. Another fell to a gentleman of Rheims, for what seemed to excite surprise and sensation in the assembly—a mode of preserving bees during the winter, by burying them in a sort of furrow, or pit. In the spring they come forth in good health, having hibernated in torpor and abstinence.

# Editors' Table.

TRANSACTIONS OF THE N. Y. STATE AGRICULTURAL SOCIETY, with an Abstract of the Proceedings of the County Agricultural Societies, for 1848.—This annual and welcome visitor has just been received, fraught, as usual, with a treasure of knowledge, which cannot fail to instruct the practical farmer, as well as all interested in the culture of the soil. The volume is handsomely illustrated with one colored plate and numerous engravings on wood. It is swelled much beyond its usual size, containing 975 pages, in consequence of two long articles, one on the "Analysis of Indian Corn," by J. H. Salisbury, and the other the first part of "A Historical, Topographical, and Agricultural Survey of the County of Washington," by Dr. Asa Fitch. The latter, thus far, however authentic it may be in its compilation, or interesting in its character to local readers, appears better suited for the Transactions of the Historical Society, than for a work like the present. The second part, which will probably be inserted in the next volume, it is hoped will be more to the purpose. The other articles particularly worthy of perusal are those on Fruits, Field Crops, Domestic Animals, Dairies, and the Drainage of Lands.

DEATH OF ALEXANDER WALSH.—This distinguished and ardent friend of agriculture and horticulture died at his residence, in Lansingburgh, N. Y., on the 4th of August, in the 67th year of his age. He was for many years an active and energetic merchant in the county of Rensselaer, and was one of the earliest promoters of the N. Y. State Agricultural Society, in which he held an office until his death.

DEATH OF ELIAS PHINNEY.—Elias Phinney, of Lexington, Mass., died on the 24th of July, at the age of 70 years. Mr. Phinney has for many years been distinguished in Massachusetts as a scientific and practical agriculturist. His farm was an object of curiosity to travellers, scarcely less than the monument to the first martyrs of the Revolution. By his enterprise and skill, it had been converted from a hard, stony, and sandy estate, into a succession of blooming orchards, extensive meadows, and luxurious fields. He had devoted great attention to the improvement of domestic animals of every description, and with remarkable success. His experiments in transforming peat swamps into fertile meadow land, by a judicious system of draining, were eminently successful, and have contributed in no small degree to the advancement of agriculture in Massachusetts. He also had the charge and management of the celebrated stock, imported a few years since by that state.

CHOLERA AMONG HORSES AND HOGS.—The Cincinnati papers state that hogs, and even horses in the streets, have been smitten with the cholera, and died. Mr. Crutchfield, living about fifty miles below that city, lost fifty of his hogs in a single night, which apparently suffered great pain, with continued cramps and spasms.

FINE WOOL.—We have received from Mr. John D. Patterson, of Westfield, Chatauque county, N. Y., samples of wool which do great credit to him as a breeder. The first is from a buck one year old. The fleece weighed, well washed and then dried, 14 lbs. 8 oz., and is of the finest quality of Merino. The second sample approaches the Saxon for fineness. This was taken from the fleece of a ewe one year old, weighing 10 lbs. 10 oz. In addition to yielding so large a fleece, this young ewe has bred a lamb. These sheep were purchased of Mr. Taintor, of Hartford, Connecticut, of whose importations we have several times spoken in the Agriculturist. Had we not seen the parents of Mr. Patterson's Merinos, we could have scarcely believed it possible for yearling sheep to produce such large fleeces and of so fine a quality. But seeing is believing; and if any one is disposed to doubt Mr. P.'s statement, let him call on him or Mr. Taintor, and he will soon be convinced that the whole has not yet been told concerning these magnificent sheep.

LIVE-STOCK INSURANCE COMPANY.—A company has been organized in Connecticut, having their office in New Haven, for the insurance of "live stock." This is the first effort to protect, in this country, a class of subjects heretofore overlooked. The design was derived from the system of insurance prevailing so extensively in England, also in France and other parts of continental Europe, where the insurance of live stock presents an important feature in the influences which have contributed so largely in furnishing the various and superior qualities.

LARGE TIMOTHY.—We have received a sample of Timothy, just in flower, from Mr. Stephen J. Thompson, of Oakington, near Havre de Grace, Maryland, which measures five and a half feet in height, with heads fourteen and a half inches in length!

MANUFACTURE OF MCCORMICK'S VIRGINIA REAPERS.—This extensive establishment, owned by Messrs. McCormick, Ogden & Co., at Chicago, Illinois, is carried on in a brick building 40 by 190 feet, one half two two stories, and the other half three stories high. The machinery is driven by a highly finished engine of 30-horse power, giving motion and efficiency to three planing machines, four circular and two unright saws, two wood lathes, seven iron lathes, three boring machines, machinery for cutting key seats in cart wheels, and a fan for blowing blacksmiths' fires. Between 120 and 130 men are employed in the establishment. We are informed that 500,000 feet of ash lumber, 150 tons of wrought iron and 250 tons of castings are used annually. Since the first of last October, 1,500 reapers have been built and sold at a value of $180,000. With only one man to rake and a boy to drive, it is said that this machine cuts from 15 to 20 acres a day, depositing the grain in gavels ready for binding, and leaving no scattered heads on the field. The reapers manufactured at this establishment are sold in all the western states, but the demand is not fully supplied.

A CHEAP SUBSTITUTE FOR A VAPOR BATH.—Take a piece of lime about half the size of your closed hand, and wrap around it a wet cloth sufficiently wrung to prevent water running from it. A dry cloth is to be several times wrapped around this; place one of these packets on each side, and by both thighs, (a few inches from them,) of the patient; an abundant humid heat is soon developed by the action of the water on the lime, which quickly induces copious perspiration, the effect lasting for two hours at least. When sweating is fully established, the lime may be withdrawn, which is now reduced to a powder. In this way, neither copious drinks nor loading the bed with covering is required.—*Gazette Medicale.*

MUNIFICENT BEQUEST.—The late Mr. Theodore Lyman has bequeathed a legacy of $50,000 to the Reform School, at Westborough, Mass., of which he was the founder. He has also given $10,000 to the Boston Farm School, of which he has been an active officer for several years, and $10,000 to the Massachusetts Horticultural Society, in whose labors he always took a deep interest.

EFFECT OF SALT ON WHEAT.—Some of our readers may recollect that last fall we mentioned an experiment made by Mr. John Park, of Gates, by sowing a barrel of salt to the acre upon a summer fallow. The ground was plowed once the preceding fall, again in May, and salt sowed thereon as above, and afterwards plowed twice before seeding. On the 1st and 2d of September, wheat was sown, two bushels to the acre. The crop has just been harvested, and Mr. P. is confident it will yield forty bushels to the acre.—*Rochester American.*

## REVIEW OF THE MARKET.

### PRICES CURRENT IN NEW YORK, AUGUST 18, 1849.

| | | | | |
|---|---|---|---|---|
| ASHES, Pots, | per 100 lbs. | $6 00 | to | $6 12 |
| Pearls, | do. | 6 00 | " | 6 12 |
| BALE ROPE, | lb. | 9 | " | 11 |
| BARK, Quercitron, | ton, | 28 00 | " | 30 00 |
| BEANS, White, | bush. | 75 | " | 1 25 |
| BEESWAX, Am. Yellow, | lb. | 19 | " | 22 |
| BOLT ROPE, | do. | 11 | " | 12 |
| BONES, ground, | bush. | 40 | " | 55 |
| BRISTLES, American, | lb. | 25 | " | 65 |
| BUTTER, Table, | do. | 15 | " | 25 |
| Shipping, | do. | 9 | " | 15 |
| CANDLES, Mould, Tallow, | do. | 10 | " | 13 |
| Sperm, | do. | 25 | " | 40 |
| Stearic, | do. | 20 | " | 25 |
| CHEESE, | do. | 5 | " | 10 |
| COAL, Anthracite, | 2,000 lbs. | 5 00 | " | 6 00 |
| CORDAGE, American, | lb. | 11 | " | 13 |
| COTTON, | do. | 8 | " | 12 |
| COTTON BAGGING, Amer. hemp, | yard, | 15 | " | 16 |
| FEATHERS, | lb. | 30 | " | 40 |
| FLAX, American, | do. | 8 | " | 9 |
| FLOUR, Northern, Southern and West'rn | bbl. | 4 25 | " | 5 81 |
| Fancy, | do. | 5 81 | " | 6 25 |
| Richmond City Mills, | do. | 6 75 | " | 7 00 |
| Buckwheat, | do. | — | " | — |
| Rye, | do. | 3 25 | " | 3 31 |
| GRAIN—Wheat, Western, | bush. | 1 05 | " | 1 30 |
| Red and Mixed | do. | 90 | " | 1 15 |
| Rye, | do. | 61 | " | 63 |
| Corn, Northern, | do. | 62 | " | 64 |
| Southern, | do. | 60 | " | 62 |
| Barley, | do. | 52 | " | 55 |
| Oats, | do. | 34 | " | 42 |
| GUANO, Peruvian, | 2,000 lbs. | 47 00 | " | 50 00 |
| " Patagonian | do | 30 00 | " | 35 00 |
| HAY, in bales, | do | 45 | " | 50 |
| HEMP, Russia, clean, | ton. | 200 00 | " | 210 00 |
| American, water-rotted, | do. | 160 00 | " | 220 00 |
| American, dew-rotted, | do. | 140 00 | " | 200 00 |
| HIDES, Dry Southern, | do. | 8 | " | 9 |
| HOPS, | lb. | 4 | " | 12 |
| HORNS, | 100. | 2 00 | " | 10 00 |
| LEAD, pig, | do. | 4 60 | " | 4 63 |
| Pipes for Pumps, &c | lb. | 5 | " | 7 |
| MEAL, Corn, | bbl. | 3 31 | " | 3 37 |
| Corn, | hhd. | 13 75 | " | 14 00 |
| MOLASSES, New Orleans, | gal. | 20 | " | 26 |
| MUSTARD, American, | lb. | 16 | " | 31 |
| NAVAL STORES—Tar, | bbl. | 1 75 | " | 2 00 |
| Pitch, | do | 1 25 | " | 1 75 |
| Rosin, | do. | 86 | " | 95 |
| Turpentine, | do. | 2 50 | " | 2 75 |
| Spirits Turpentine, Southern, | gal. | 33 | " | 35 |
| OIL, Linseed, American, | do. | 67 | " | 68 |
| Castor, | do. | 1 50 | " | 1 60 |
| Lard, | do. | 60 | " | 70 |
| OIL CAKE, | 100 lbs. | 1 00 | " | 1 50 |
| PEAS, Field, | bush. | 75 | " | 1 25 |
| Black-eyed, | 2 do | 1 50 | " | 1 75 |
| PLASTER OF PARIS, | ton. | 2 00 | " | 2 75 |
| Ground, in bbls., | of 300 lbs. | 1 12 | " | 1 25 |
| PROVISIONS—Beef, Mess, | bbl. | 12 00 | " | 14 00 |
| Prime, | do. | 10 00 | " | 12 00 |
| Smoked | lb. | 6 | " | 12 |
| Rounds, in pickle, | do. | 4 | " | 6 |
| Pork, Mess, | bbl. | 10 00 | " | 13 00 |
| Prime, | do. | 7 00 | " | 10 50 |
| Lard, | lb. | 6½ | " | 7½ |
| Bacon sides, Smoked, | do. | 3 | " | 4½ |
| In pickle, | do. | 3 | " | 4 |
| Hams, Smoked, | do. | 5 | " | 9 |
| Pickled, | do. | 4 | " | 7 |
| Shoulders, Smoked, | do. | 4 | " | 5 |
| Pickled, | do. | 3 | " | 4 |
| RICE, | 100 lbs. | 3 25 | " | 4 06 |
| SALT, | sack, | 1 17 | " | 1 30 |
| Common, | bush. | 20 | " | 35 |
| SEEDS—Clover, | lb. | 5½ | " | 7 |
| Timothy, | bush. | 2 00 | " | 3 50 |
| Flax, clean | do. | 1 30 | " | 1 40 |
| rough, | do. | 1 20 | " | 1 30 |
| SODA, Ash, cont'g 80 per cent. soda, | lb. | 3 | " | — |
| Sulphate Soda, ground, | do. | 1 | " | — |
| SUGAR, New Orleans, | do. | 4 | " | 6 |
| SUMAC, American, | ton, | 35 00 | " | 37 00 |
| TALLOW, | lb. | 7 | " | 8 |
| TOBACCO, | do. | 3 | " | 9 |
| WHISKEY, American, | gal. | 24 | " | 26 |
| WOOLS, Saxony, | lb. | 35 | " | 60 |
| Merino, | do. | 25 | " | 35 |
| Half-blood | do. | 20 | " | 25 |
| Common do | | 18 | " | 20 |

### NEW-YORK CATTLE MARKET.

*At Market.*—1,150 Beef Cattle, (1,120 southern, the remainder from this state and east,) 50 Cows and Calves, and 4,500 Sheep and Lambs.

*Beef Cattle.*—The market for Beeves is rather active, the sales of good retailing qualities ranging from $6 to $8 per hundred. The number on hand unsold is estimated at 100.

*Cows and Calves.*—These vary from $20 to $45. Unsold, 15.

*Sheep and Lambs.*—These are plenty; the Sheep selling from $1.25 to $6, and the Lambs from $1 to $3.75 each. The number left unsold, 350.

REMARKS.—Ashes, Flour, Grain, Hay, Beef, Pork, Wool, Cotton, and Rice have risen slightly since our last, and are in more active demand. Other articles without change.

*Crops.*—The small grain is all harvested, and though the Wheat has suffered much in certain sections of the western states, and also at the south, still, as far as can be now ascertained, the crop will be a full average for the Union. Corn long since ripened at the south, and is rather more than average; in other sections of the country, except far north, it promises fairly. Some complaint of want of full earing at the north. The drought has been very severe in many parts of the northern and western states, greatly injuring the root crops and late pastures, but the abundant rains during August will remedy this in a measure.

*Money* continues abundant for all business purposes.

*The Cholera* is rapidly on the decrease. Our friends may now visit the city without danger. We have been constantly at our post; eaten vegetables, fruit, &c, as usual, and were never in better health. We mention this merely to show that the cholera is not so much to be dreaded if one is regular in his habits, temperate, and careful.

TO CORRESPONDENTS.—Communications have been received from E. Payson, J. W. Burrup, Thomas Antisell, E. S., M. W. Philips, Samuel Allen, W. D., Wm. H. Sotham, A. Stevens, and Reviewer.

*Sitting Hens.*—The Semi-Weekly Whig, at Yazoo City.—We advise your would-be witty correspondent to refer to the definition of the verb *to sit*, and the participle *sitting*, in Webster's Dictionary. He will there find, that fowls do actually *sit*, not *set* on eggs, and thereby hatch out their young.

*China Tree.*—W. D., of Morristown, N. J.—What is commonly called the "China Tree," at the south, is not the Ailantus glandulosa, but the Melia azedarach, originally a native of Persia. It is also known under the name of "Indian Lilac," "Persian Lilac," "Bead Tree," "Pride of China," and "Pride of India."

*Reclaiming Salt Marshes.*—E. Payson, of Portland, Me.—The water should be first excluded from your marsh by means of a dyke constructed with valves or flood gates, closing with the rise of the tide, and opening without aid, if necessary, at its ebb, to let off all water that may have accumulated on the marsh by leakage, springs, or rain. The land should then be intersected by ditches suitable in number and depth to keep it dry. Then, any kind of sand, gravel, or rubbish, may be spread over the surface to a depth of three or four inches, afterwards to be well incorporated, by plowing or otherwise, with quicklime and the upper portion of the sod. Thus prepared, a salt marsh would be adapted to the cultivation of grass, and probably many of our garden plants.

ACKNOWLEDGEMENTS.—Third Annual Report of the Board of Agriculture of the State of Ohio, January, 1849; List of Premiums and Rules and Regulations for the Second Cattle Show and Agricultural and Horticultural Exhibition, to be held by the Maryland-State Agricultural Society, in the City of Baltimore, on Wednesday, Thursday, and Friday, the 10th, 11th, and 12th of October, 1849; The North and the South—a Review of the Lectures on the same Subject, delivered by Mr. Elwood Fisher, before the Young Mens' Mercantile Association, of Cincinnati, Ohio. From the Southern Quarterly Review.


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Sept.1yr*.

## COMMERCIAL GARDEN AND NURSERY.

PARSONS & CO., at Flushing, near New York. The proprietors of this establishment invite public attention to their large assortment of every desirable variety of Fruit and Ornamental Tree or Shrub. Their importations of everything new in Europe are annually continued, and they offer a very large variety of Ornamental Trees and Shrubs imported expressly for arboretums and pleasure grounds. Their collection of Roses is annually enriched by novelties from abroad, many of which may be found described in their new work on the Rose, recently published. Fruit Trees receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well-formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors at Flushing, near New York, where catalogues will also be furnished. They have established a Branch at Brighton Depôt near Boston and by the entire success of their trees transplanted thither have thoroughly proved the superior adaptation of Long-Island Trees to the soil and climate of any part of New England. This they attribute to the perfect maturity attained by the wood before frost, which renders the trees suitable for transportation to any latitude.

At the season of transplanting, a salesman will be at their Brighton Branch to furnish those who may prefer obtaining their supply thence. mhtf

## SCHOOL OF APPLIED CHEMISTRY,

YALE COLLEGE, NEW HAVEN, CT.

THE Laboratory in this School is open for nine months of the year for instruction in the analyses of soils, minerals, ores, &c.

During the Summer and Autumn Terms there will be lectures on Mineralogy, Geology, Natural Philosophy, Elementary Chemistry, and other useful branches of Natural History.

The annual course of lectures on Agricultural Chemistry, by Professor Norton, will commence soon after the middle of January, and will continue till about the first of April, at the rate of four or five lectures in each week.

These lectures are intended to be delivered in a form quite intelligible to those who have never turned their attention to chemical studies. The great principles of improved Agriculture will be illustrated and explained during the progress of this course, in such a manner as to be understood by all.

TERMS.—Tickets for the course $10. Students in the Laboratory have glass, chemicals, balances, and other apparatus furnished them, and pay $20 per month. Analyses of minerals, soils, &c., made promptly, and on reasonable terms.

For further information apply to either of the subscribers.

B. SILLIMAN, JR.,
Professor of Chemistry Applied to the Arts.
J. P. NORTON,
Professor of Agricultural Chemistry.

New Haven, July, 1849. sept 1t

## SELLING OFF—LINNÆAN BOTANIC GARDEN AND NURSERY.

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WINTER & CO., PROPRIETORS.

IN consequence of the decease of the junior, and of the advanced age of the surviving partner, who, therefore intends to relinquish the business; the entire stock of this establishment, comprising every description, including the newest and choicest varieties, of FRUIT AND ORNAMENTAL TREES, SHRUBS, VINES, AND PLANTS, ROSES, GREENHOUSE PLANTS, BOX EDGING, &c., will be disposed of in lots to suit purchasers, at very reduced prices, in order to close the business as speedily as possible.

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Nurserymen, venders, and others wishing to purchase, by wholesale, will be supplied at such reduced prices, according to quality and quantity, as will probably prove satisfactory to them.

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## NEW BOOKS.

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82 *Cliff Street, New York, Vols. I. and II. of*

THE HISTORY OF THE UNITED STATES OF AMERICA, from the Discovery of the Continent to the Organization of Government under the Federal Constitution. By Richard Hildreth. To be completed in three volumes octavo.

This important work presents, in a compact and popular form the first complete history of the United States that has ever appeared. The author's pursuits and studies have prepared him for the most faithful and skillful execution of his task. The style is characterized by great perspicuity, force, and gracefulness; the narrative is unencumbered, and the tone of the history sound and scholar-like. He gives the great mass in our reading country just the history which is adapted to their wants, and which, we have no doubt, will at once gain the position that it deserves, of a popular, readable book for the million, which may be relied on for the correctness of its details, while it wins the attention by the simple beauty of its narrative.—*Corr. Boston Chronotype.*

It is full of detail, bears marks of care and research, and is written under the guidance of clear sight and good judgment, rather than of theory, philosophical or historical, or of prejudice of any sort whatever. We trust it will be widely read. —*N. Y. Courier & Enquirer.*

DANTE'S DIVINE COMEDY.—THE INFERNO—A Literal Translation. By Dr. John A. Carlyle. 12mo.

The object of this translation, as stated by the author, is "to give the real meaning of Dante, as literally and briefly as possible." Probably no one is better qualified to undertake the task than Dr. Carlyle. The same energy and force of expression regarded as peculiar to Thomas Carlyle, are traceable in the literary productions of his brother, the author of the work before us. The text of the original, carefully collected from the best editions, accompanies the translation, and is printed beneath it, that those who have any knowledge of Italian may understand the original itself more easily. It well deserves the commendation it has received from the English press, and is, both in spirit and manner of execution, the best translation published.—*N. Y. Journal of Commerce.*

sept 2t*

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GRANT'S celebrated Fanning Mills and Grain Cradles have been awarded six first premiums at the New-York State Fairs; also, at the American Institute of New York and several County Fairs. Wherever exhibited, they have taken the first premium over all other mills. The great encouragement we have received from dealers and agriculturists has induced us to enlarge our business. All orders will receive prompt attention.

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## VIRGINIA LANDS.

THE attention of Northern Farmers who wish to purchase in Fairfax County, Va., is invited particularly to two farms for sale, three miles east from Fairfax Court House, thirteen from Alexandria, and fourteen from the city of Washington. There are no buildings on either tract, but, by following the custom of the country, comfortable and temporary ones can be cheaply built. The soil is well adapted to farming purposes, and there is timber on them, near two sawmills.

These farms would sell in the north, for from $50 to $100 per acre, and can be bought here in a more pleasant and healthy climate, one for eight, the other for ten dollars per acre, on easy terms, and a good title given.

Further information given, if requested, by T. R. Love, trustee, either personally, or by letter, (postage paid,) directed to Fairfax Court House, Va.

f. tf. H. FULLER.

## PERUVIAN GUANO.

The undersigned has made arrangements with A. B. Allen & Co., of New York, by which he is enabled to offer unusual facilities to farmers who may wish to obtain a supply of guano for the next crop of wheat. It will be delivered either at Richmond or Petersburg, and furnished at the lowest prices at which it can be afforded. The high reputation of those gentlemen is a sufficient guarantee that none but the best article will be sent from their house. All inquiries will be promptly responded to.

THOS. S. PLEASANTS,
au 2t Petersburg, Va.

## AYRSHIRE HEIFERS.

WANTED by the last of October next, two Ayrshire Heifers, from six to eight months old. They must be from approved milking families. Please to state price, delivered in this city.

jy 3t SAMUEL ALLEN, 189 & 191 Water st., N. Y.

## VALUABLE FARMS IN EASTERN VIRGINIA.

LOT No. 38. 230 acres in Prince George, 8 miles S. of Petersburg, in the marl region,—50 acres cleared, 75 acres of timber in original growth, with much excellent heart pine. Price $5 per acre.

No. 39. 111 acres, 4 miles from town, near the railroad, all in wood, in marl region. Price $10 per acre.

No. 40. 286 acres on James River, 3½ miles from Smithfield in Isle-of-Wight county, beautifully situated; good dwellings and outbuildings, within 200 yards of the landing, where the finest fish are caught all the year, excellent oyster flats, &c.; good apple and peach orchards; a most desirable place for raising fruits and truck for the northern markets. Price $3,600.

No. 41. 240 acres 20 miles west of Richmond, with two large dwellings—the land is good, and the situation very healthy. Will be sold very low.

No. 42. 426 acres ½ open, in Charles City, near an excellent wharf, on James River, where steamboats stop daily, and very near a settlement of Jerseymen. The buildings are good and the land excellent. Price $12 per acre.

No. 43. 400 acres in Gloucester county, with good house and outbuildings, 200 acres cleared, marl in every field—200 acres in heavy timber; within two miles of a good landing. Price $2,000.

No. 44. 533 acres on Pamunky River, in King-William county, 150 acres cleared, much of the balance heavily timbered with white oak and ash, will be sold at a great bargain.

No. 45. 440 acres 5½ miles south of Petersburg. 150 acres open, the balance in timber, good meadow land, well watered with fine springs, good dwelling and outhouses, ¾ of a mile from the railroad. Price $2,700.

No. 46. 500 acres on the public road from Petersburg to Surry, 15 miles from town, the larger portion open, and part of it now productive of tobacco, wheat, corn, and cotton; plenty of good marl, buildings comfortable. Price $3 per acre. Also an adjoining property with better buildings.

No. 47. 220½ acres 15 miles south of Petersburg, on a public stage road, all in very heavy heart pine of superior quality, hickory and oak; the soil is excellent; plenty of cleared land can be had adjoining; it is 3 miles from the railroad. Price $1,000.

No. 48. 521 acres, about 200 acres in cultivation, all marled, and producing fair crops, good brick house and good outbuildings, marl in the greatest abundance, much good timber and wood. It is bounded on one side by a navigable creek; is only 2 miles from a good wharf on James River, where steamboats stop every day, and 2 miles from Surry Court House. Price $3,500.

No. 49. 600 acres, 1 mile from Surry Court House, 4½ miles from James River, 300 acres open, all marled, most in clover, and now productive of good crops of wheat and corn; good two story dwelling; abundance of marl; good springs; much good timber and wood. Price about $5,000.

No. 50. 500 acres, all in wood, adjoining the above; it will cut 30 cords of wood per acre, and is within 1½ miles of a landing. Price $3,000.

No. 51. 585 acres adjoining the above; 150 acres open; 250 acres in virgin growth, 1½ miles from Surry Court House. It is well watered, and has abundance of marl; a public road divides the tract, and each part has an old house upon it. Price $4 per acre.

No. 52. 793 acres, 3 miles from Cabin Point, and 5 miles from James River, 250 acres cleared; plenty of good marl; good two-story dwelling and outbuildings; a good mill seat and old mill; much good timber and wood. Price $5,000.

No. 53. 470 acres, 4 miles from Surry Court House, adjoining Swan's Point, on James River; about 150 acres in cultivation, all marled; plenty of marl; a good landing on Cross Creek which bounds one side of the farm, dividing it from No. 48. Game and fish are abundant. An excellent two story dwelling, outhouses and garden; good springs, &c. Price about $3,500.

No. 54. 724 acres near Williamsburg, Va.; 400 acres in oak and pine timber, on a navigable stream; abundance of marl. Most of the open land has been improved, and produces good crops of corn, wheat, and clover, &c., &c. The buildings are comfortable; terms accommodating. Also a valuable manufacturing mill, within six miles of the above land.

No. 55. 7,000 acres on James River, in Charles-City county, near 3,000 acres in cultivation, and highly improved. The soil is of first quality, and now bears from 25 to 30 bushels of wheat; 50 to 60 bushels of corn per acre. There are numerous dwellings, barns and mills, all in excellent order. The timber is unsurpassed. Upwards of 3,000 acres are in virgin growth, of excellent white oak for shipbuilding, and heart pines of the largest size and best quality; many of the trees being from 3 to 4 feet in diameter, and from 50 to 75 feet to the first branch. This estate fronts on the James River for 6 to 8 miles. There is an excellent wharf, where vessels drawing 16 feet water lie afloat at low tide; and the steamboats to and from Baltimore, Norfolk, Petersburg, and Richmond, stop daily. This estate is worthy the attention of agriculturists, shipbuilders, and lumbermen. It will be sold either altogether or in portions to suit purchasers, and the terms will be very accommodating. A map of the whole will soon be prepared.

No. 56. 213½ acres, about ½ in cultivation, and in good order, 1 mile from Surry Court House, and 3 miles from Carter's Wharf, on James River, where the steamboats stop every day. It has on it 1,000 cords of wood, within 1½ miles of a good landing; plenty of marl. The buildings are in good order. The dwelling is 30 feet square, with 2 rooms and a passage on the first floor. 4 rooms above, and a finished basement. Vessels from New York, &c., come here every spring for early fruits, potatoes, &c. Price $1,500 cash.

No. 57. 477 acres on the Appomatox, 8 miles N. E. of Petersburg. 100 acres open, the balance in good timber. Price $2,000.

No. 58. 636 acres, bounded ¾ of a mile by the Appomatox, 8 miles W. of Petersburg, 300 acres open, and much heavy timber. It has a canal to town. Price $5 50 per acre.

No. 59. Adjoining the last is an excellent mill seat, with water power sufficient for several mills of the heaviest class, directly on the canal.

No. 60. 166½ acres, 22 miles S. W. from Petersburg, and 4 miles from Dinwiddi Court House; 250 acres in cultivation, land in fair condition, and would make a fine grazing farm; has fine springs and streams, and much excellent timber. The neighborhood is very healthy, and the society good. Price $3.50 per acre.

No. 61. 550 acres, near Charles-City Court House; good dwelling, ice house and all other outbuildings. The soil is excellent, situation healthy, and water good; 2 miles to a navigable creek, and 4 miles from James River; 210 acres are in cultivation, and the timber is very fine. Price $8 per acre.

No. 62. 550 acres, 20 cleared, the balance heavily timbered. It lies on a navigable creek, and is within 2 miles of James River. The land is level, and soil superior. Price $8 per acre.

No. 63. 412 acres on James River in Charles-City county. It has only 40 acres cleared, the balance in wood. Price $3,500.

No. 64. 420 acres, six miles south of Petersburg, on the railroad; half is open, the balance in wood; good house. It is in the neighborhood of several Jerseymen. Price $3,000.

No. 65. 62½ acres, in Prince-George county, 5 miles from James River, 200 acres open, marled, and producing good crops. The house is comfortable; many choice fruit trees; an excellent neighborhood, and has good water. Price $3,000.

No. 66. Near 500 acres in Prince-George county, 15 miles S. E. of Petersburg; 300 acres cleared, and most of it producing fine crops. The house and outbuildings are very commodious, and in good repair. There is plenty of fine fruit; an abundance of marl and excellent water. Price $3,500; $1,400 in cash, and the balance in one, two, and three years.

The subscriber earnestly invites the attention of his friends, and all who are seeking new homes, and profitable investments, to these properties, and others which he has in his care. Believing that this region possesses substantial advantages over any other part of the United States, in climate, soil, low prices of lands, navigation, and facilities for travel and transportation of produce to the best markets, he invites a thorough examination, and promises every aid in his power.

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THE AMERICAN FARM BOOK, or compend of American Agriculture; being a practical treatise on soils, manures, draining, irrigation, grasses, grain, roots, fruits, cotton, tobacco, sugar cane, rice, and every staple product of the United States, with the best methods of planting, cultivating, and preparation for market. Illustrated by more than 100 engravings. By R. L. Allen, author of Diseases of "Domestic Animals," and editor of the "American Agriculturist;" together with Browne's Memoir on Indian Corn, including Barlow's celebrated Poem. Published and for sale by

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*The Threshers* consist of a small spiked cylinder with a concave plane over it, and a level feeding table. There are several improvements in the overshot threshers. 1. They admit of a level table for feeding, thus enabling the tenders to stand erect, and control the motion of the horse and machine by means of a brake, by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, heavy substances such as stones, blocks &c., drop at the end of the table, and are not carried between the spikes, by which they and the machine are broken. 3. The overshot cylinder does not scatter the grain but throws it within three feet of the machine. 4. This arrangement also admits of attaching a *separator* high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is longer, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder is fully made up by those in the concave, which is stationary. 7. The separator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men, with a single power, can thresh 75 to 100 bushels of wheat or rye; or four men with a double power, 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat, per day. All the above are compact and can be carried where wanted complete, or they may be readily taken apart and packed for distant transportation by a wagon or otherwise.

| | |
|---|---|
| Price of single Power, | $80 |
| " " Thresher, | $28 |
| " Separator and fixtures, | $7 |
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The price of the double power, thresher, separator, &c., complete, is $145, including rights of using. The above are sold singly or together as desired.

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THE MOUNT AIRY AGRICULTURAL INSTITUTE will commence its Winter Session on the first Thursday of October next.

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## FARM FOR SALE.

THE Dairy Farm of 200 acres, belonging to David S. Mills, at Newtown, L. I., upon which he now resides, is offered for sale—the whole, or in parcels. The well-known reputation of the above farm furnishes fully its character and advantages, it being second to none in the Union; also, the entire stock, &c., belonging to the same. For terms, apply to David S. Mills, on the premises, 5 miles from Williamsburgh, Ferry, on Jamaica turnpike road, or to H. Meigs, American Institute, N. Y. au 6t*


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